



## MIND

A QUARTERLY REVIEW

OF

## PSYCHOLOGY AND PHILOSOPHY.

## I.—ARE WE AUTOMATA?

EVERYONE is now acquainted with the Conscious-Automaton-theory to which Prof. Huxley<sup>1</sup> gave such publicity in his Belfast address; which the late Mr. D. A. Spalding punctiliously made the pivot of all his book-notices in *Nature*; which Prof. Clifford fulminated as a dogma essential to salvation in a lecture on "Body and Mind"<sup>2</sup>; but which found its earliest and ablest exposition in Mr. Hodgson's magnificent work, *The Theory of Practice*.<sup>3</sup> The theory maintains that in everything outward we are pure material machines. Feeling is a mere collateral product of our nervous processes, unable to react upon them any more than a shadow reacts on the steps of the traveller whom it accompanies. Inert, uninfluential, a simple passenger in the voyage of life, it is allowed to remain on board, but not to touch the helm or handle the rigging.

The theory also maintains that we are in error to suppose that our thoughts awaken each other by inward congruity or rational necessity, that disappointed hopes *cause* sadness, premisses conclusions, &c. The feelings are merely juxtaposed in that order without mutual cohesion, because the nerve-processes to which they severally correspond awaken each other in that order.

<sup>1</sup> *Fortnightly Review*, Vol. XVI., p. 555.

<sup>2</sup> *Ibid.*, p. 714.

<sup>3</sup> Vol. I., pp. 416 ff.

It may seem strange that this latter part of the theory should be held by writers, who like Prof. Huxley have openly expressed their belief in Hume's doctrine of causality. That doctrine asserts that the causality we seem to find between the terms of a physical chain of events, is an illegitimate outward projection of the inward necessity by which we feel each thought to sprout out of its customary antecedent. Strip the string of necessity from between ideas themselves, and it becomes hard indeed for a Humian to say how the notion of causality ever was born at all.

This, however, is an *argumentum ad hominem* which need not detain us. The theory itself is an inevitable consequence of the extension of the notion of reflex action to the higher nerve-centres. Prof. Huxley starts from a decapitated frog which performs rational-seeming acts although probably it has no consciousness, and passing up to the hemispheres of man concludes that the rationality of their performances can owe nothing to the feelings that co-exist with it. This is the inverse of Mr. Lewes's procedure. He starts from the hemispheres, and finding their performances apparently guided by feeling concludes, when he comes to the spinal cord, that feeling though latent must still be there to make it act so rationally. Clearly such arguments as these may mutually eat each other up to all eternity.

The reason why the writers we speak of venture to dogmatise as they do on this subject, seems due to a sort of philosophic faith, bred like most faiths from an æsthetic demand. Mental and physical events are, on all hands, admitted to present the strongest contrast in the entire field of being. The chasm which yawns between them is less easily bridged over by the mind than any interval we know. Why then not call it an absolute chasm? And say not only that the two worlds are different, but that they are independent? This gives us the comfort of all simple and absolute formulas, and it makes each chain homogeneous to our consideration. When talking of nervous tremors and bodily actions, we may feel secure against intrusion from an irrelevant mental world. When, on the other hand, we speak of feelings, we may with equal consistency use terms always of one denomination, and never be annoyed by what Aristotle calls "slipping into another kind". The desire on the part of men educated in laboratories not to have their physical reasonings mixed up with such incommensurable factors as feelings is certainly very strong. Nothing is commoner than to hear them speak of conscious events as something so essentially vague and shadowy as even doubtfully to exist at all. I have heard a most intelligent

biologist say : " It is high time for scientific men to protest against the recognition of any such thing as consciousness in a scientific investigation ". In a word, feeling constitutes the " unscientific " half of existence, and any one who enjoys calling himself a " scientist " will be too happy to purchase an untrammelled homogeneity of terms in the studies of his predilection, at the slight cost of admitting a dualism which, in the same breath that it allows to mind an independent status of being, banishes it to a limbo of causal inertness, from whence no intrusion or interruption on its part need ever be feared.

But Common Sense also may have its æsthetic demands, and among them may be a craving for unity. The spectacle of an ultimate and inexplicable dualism in the nature of things may be as unsatisfying as the obligation to calculate with heterogeneous terms. Two " aspects," *nemine adspiciente*, seem uncalled for. One may well refuse, until absolutely overpowered by the evidence, to believe that the world contains items which in no wise influence their neighbours ; whose existence or non-existence need, so far as the remainder go, be taken into no account. It is a smoother and more harmonious thought to imagine all the items of the world without exception as interlocked in bonds of action and reaction, and forming a single dynamic whole.

And now, who shall decide between such rival æsthetic needs ? *A priori* to shrink from a " chasm " between the objects of one's contemplation is as respectable as to dislike heterogeneity in the factors of one's reasoning operations. The truth is, then, that neither æsthetic motives nor ostensible reasons entitle us to decide between the Conscious-Automaton-theory and the theory of Common Sense. Both alike are conceptions of the possible, and for any one dogmatically to affirm the truth of either is, in the present state of our knowledge, an extremely unscientific procedure.

The question for us then is : Can we get light from any facts hitherto ignored in the discussion ? Since the direct evidence of our living feeling is ruled out of court as mendacious, can we find circumstantial evidence which will incline the balance either way, and save us from the dreary strife of prejudice and prepossession ?

I think we can, and propose in the remainder of this article to show that this presumptive evidence wholly favours the efficacy of Consciousness. Consciousness, namely, has been slowly evolved in the animal series, and resembles in this all organs that have a use. Since the mere supernumerary depicted by the Conscious-Automaton-theory would be useless, it follows

that if we can discover the utility of consciousness we shall overthrow that theory.

Our problem consequently is: Of what use to a nervous system is a superadded consciousness? Can a brain which has it function better than a brain without it? And to answer this question, we must know, first, the natural defects of the brain, and secondly, the peculiar powers of its mental correlate.

Since consciousness is presumably at its minimum in creatures whose nervous system is simple, and at its maximum in the hypertrophied cerebrum of man, the natural inference is that, as an *organe de perfectionnement*, it is most needed where the nervous system is highly evolved; and the form our first question takes is: What are the defects characteristic of highly evolved nervous centres?

If we take the actions of lower animals and the actions of lower ganglia in higher animals, what strikes us most in them is the determinateness with which they respond to a given stimulus. The addition of the cerebral hemispheres immediately introduces a certain incalculableness into the result, and this incalculableness attains its maximum with the relatively enormous brain-convolutions of man. In the beheaded frog the legs twitch as fatally when we touch the skin with acid as do a jumping-jack's when we pull the string. The machinery is as narrow and perfect in the one case as in the other. Even if all the centres above the cord except the cerebral hemispheres are left in place, the machine-like regularity of the animal's response is hardly less striking. He breathes, he swallows, he crawls, he turns over from his back, he moves up or down on his support, he swims and stops at a given moment, he croaks, he leaps forward two or three times—each and all with almost unerring regularity at my word of command, provided I only be an experienced physiologist and know what ganglia to leave and what particular spur will elicit the action I desire. Thus if I merely remove his hemispheres and tilt my hand down, he will crawl up it but not jump off. If I pinch him under the arm-pits, he will croak once for each pinch; if I throw him into water, he will swim until I touch his hands with a stick, when he will immediately stop. Over a frog with an entire brain, the physiologist has no such power. The signal may be given, but ideas, emotions or caprices will be aroused instead of the fatal motor reply, and whether the animal will leap, croak, sink or swim or swell up without moving, is impossible to predict. In a man's brain the utterly remote and unforeseen courses of action to which a given impression on the senses may give rise, is too notorious to need illustration. Whether we notice it at all depends on our mental pre-occupations at the moment. If we do notice it, our



action again depends on the "considerations" which it awakens, and these again may depend as much on our transient mood or on our latest experience as on any constant tendencies organised in our nature.

We may thus lay it down as an established fact that the most perfected parts of the brain are those whose action are least determinate. It is this very vagueness which constitutes their advantage. They allow their possessor to adapt his conduct to the minutest alterations in the environing circumstances, any one of which may be for him a sign, suggesting distant motives more powerful than any present solicitations of sense. Now it seems as if certain mechanical conclusions should be drawn from this state of things. An organ swayed by slight impressions is an organ whose natural state is one of unstable equilibrium. We may imagine the various lines of discharge in the cerebrum to be almost on a par in point of permeability—what discharge a given small impression will produce may be called accidental, in the sense in which we say it is a matter of accident whether a rain-drop falling on a mountain ridge descend the eastern or the western slope. It is in this sense that we may call it a matter of accident whether a woman's first child be a boy or a girl. The ovum is so unstable a body that certain causes too minute for our apprehension may at a certain moment tip it one way or the other. The natural law of an organ constituted after this fashion can be nothing but a law of caprice. I do not see how one could reasonably expect from it any certain pursuance of useful lines of reaction such as the few and fatally determined performances of the lower centres constitute within their narrow sphere. The dilemma in regard to the nervous system seems to be of the following kind. We may construct one which will react infallibly and certainly, but it will then be capable of reacting to very few changes in the environment—it will fail to be adapted to all the rest. We may, on the other hand, construct a nervous system potentially adapted to respond to an infinite variety of minute features in the situation; but its fallibility will then be as great as its elaboration. We can never be sure that its equilibrium will be upset in the appropriate direction. In short, a high brain may do many things, and may do each of them at a very slight hint. But its hair-trigger organisation makes of it a happy-go-lucky, hit-or-miss affair. It is as likely to do the crazy as the sane thing at any given moment. A low brain does few things, and in doing them perfectly forfeits all other use. The performances of a high brain are like dice thrown for ever on a table. Unless they be loaded, what chance is there that the highest number will turn up oftener than the lowest?

All this is said of the brain as a physical machine pure and simple. Can consciousness increase its efficiency by loading its dice? Such is our next problem.

But before directly attacking it, we must pause a moment to make sure that we clearly apprehend the import of such expressions as *useful discharge*, *appropriate direction*, *right reaction*, and the like, which we have been using. They all presuppose some Good, End or Interest to be the animal's. Until this goal of his salvation be posited, we have no criterion by which to estimate the utility of any of his reactions. Now the important thing to notice is that the goal cannot be posited at all so long as we consider the purely physical order of existence. Matter has no ideals. It must be entirely indifferent to the molecules of C, H, N and O, whether they combine in a live body or a dead one. What the present conditions fatally necessitate, that they do with equal infallibility and cheerfulness; whether the result of their action be the perfume of a rose or the odour of carrion, the words of a Renouvier or the crackling of thorns under a pot, it is brought forth with as little reluctance in the one case as in the other. Good involves the notion of less good, necessitates comparison, and for a drop of water either to compare its present state with an absent state or to compare its total self with a drop of wine, would involve a process not commonly thought of as physical. Comparison requires a *tertium quid*, a *locus*—call it what you will—in which the two outward existences may meet on equal terms. This forum is what is known as a consciousness. Even sensations cannot be supposed, simply as such, to be aware of their relations to each other. A succession of feelings is not (as James Mill reiterates) one and the same thing with a feeling of succession, but a wholly different thing. The latter feeling requires a self-transcendency of each item, so that each not only *is* in relation, but knows its relation, to the other. This self-transcendency of data constitutes the conscious form. Where we suppose it to exist we have mind; where mind exists we have it.

You may, it is true, ascribe mind to a physical process. You may allow that the atom engaged in some present energy has a dreamlike consciousness of residual powers and a judgment which says, "Those are better than this". You may make the rain-drop flowing downhill posit an impossible ascent as its highest good. Or you may make the C, H, N and O atoms of my body knowingly to conspire in its construction as the best act of which they are capable. But if you do this, you have abandoned the sphere of purely physical relations.

Thus, then, the words Use, Advantage, Interest, Good, find no application in a world in which no consciousness exists.

Things there are neither good nor bad ; they simply are or are not. Ideal truth to exist at all requires that a mind also exist which shall deal with it as a judge deals with the law, really creating that which it professes only to declare.

But, granting such a mind, we must furthermore note that the direction of the verdict as to whether A or B be best, is an ultimate, arbitrary expression of feeling, an absolute fiat or decree. What feels good *is* good ; if not it is only because it negates some other good which the same power of feeling stamps as a Better.<sup>1</sup>

Thus much, then, is certain, that in venturing to discuss the perfection and uses of the brain at all, we assume at the outset the existence of *some one's* consciousness to make the discussion possible by defining some particular good or interest as the standard by which the brain's excellence shall be measured. Without such measure Bismarck's brain is no better than a suicidal maniac's, for the one works as perfectly as the other to its end. Considered as mere existence, a festering corpse is as real as a live chancellor, and, for aught physics can say, as desirable. Consciousness in declaring the superiority of either one, simply creates what previous to its fiat had no existence. The judge makes the law while announcing it : if the judge be a maggot, the suicide's brain will be best ; if a king, the chancellor's.

The consciousness of Mr. Darwin lays it down as axiomatic that self-preservation or survival is the essential or universal good for all living things. The mechanical processes of "spontaneous variation" and "natural selection" bring about this good by their combined action ; but being physical processes they can in no sense be said to intend it. It merely floats off here and there accidentally as one of a thousand other physical results. The followers of Darwin rightly scorn those teleologists who claim that the physical process, as such, of evolution follows an ideal of perfection. But now suppose that not only our Darwinian consciousness, but with even greater energy the

<sup>1</sup> I have treated this matter of teleology being an exclusively conscious function more at length in an article on "Spencer's Definition of Mind" (*Journal of Speculative Philosophy*, Jan., 1878), to which I take the liberty of referring the reader. The fact that each consciousness simply *stakes* its ends and challenges the world thereby, is most conspicuous in the case of what is called Self-love. There the end staked by each mind is peculiar to itself, whilst in respect of other ends many minds may unite in a common position. But in their psychological essence these impersonal ends in no wise differ from self-interest. Abolish the minds to whom they seem good and they have no status ; any more than the categorical imperative that perish who may John Smith must wax fat and prosper, has a *ratio existendi* after Smith's peculiar lusts have been annihilated.

consciousness of the creature itself, postulates survival as its *summum bonum*, and by its cognitive faculty recognises as well as Mr. Darwin which of its actions and functions subserves this good; would not the addition of causal efficacy to this consciousness enable it to furnish forth the means as well as fix the end—make it teleologically a fighter as well as a standard-bearer? Might not, in other words, such a consciousness promote or increase by its function of efficacy the amount of that “usefulness” on the part of the brain which it defines and estimates by its other functions? To answer such a question, we must analyse somewhat closely the peculiarities of the individual consciousness as it phenomenally presents itself to our notice.

If we use the old word category to denote every irreducibly peculiar form of synthesis in which phenomena may be combined and related, we shall certainly have to erect a category of consciousness, or what with Renouvier we may, if we prefer, call a category of personality. This category might be defined as the mode in which data are brought together for *comparison with a view to choice*.<sup>1</sup> Both these points, comparison and choice, will be found alike omnipresent in the different stages of its activity. The former has always been recognised; the latter less than it deserves.

Many have been the definitions given by psychologists of the essence of consciousness. One of the most acute and emphatic of all is that of Ulrici, who in his *Leib und Seele* and elsewhere exactly reverses the formula of the reigning British school, by calling consciousness a discriminating activity—an *Unterscheidungsvermögen*. But even Ulrici does not pretend that consciousness creates the differences it becomes aware of in its objects. They pre-exist and consciousness only discerns them; so that after all Ulrici's definition amounts to little more than saying that consciousness is a faculty of cognition—a rather barren result. I think we may go farther and add that the powers of cognition, discrimination and comparison which it possesses, exist only for the sake of something beyond themselves, namely, Selection. Whoever studies consciousness, from any point of view whatever, is ultimately brought up against the mystery of *interest* and *selective attention*. There

<sup>1</sup> Neither ‘association’ nor ‘dissociation’ is synthesis of a peculiar kind; they are mere generic modes, and are wholly unfit to serve as *differentiae* of psychical phenomena in any general philosophical classification. Comparison and choice, on the contrary, are each *sui generis*. Let it not be said that a magnet compares the different filings in a machine-shop to choose the iron filings from the heap. There is no proof that the brass filings appeal to it at all. In comparison, both terms equally appeal to consciousness.

are a great many things which consciousness *is* in a passive and receptive way by its cognitive and registrative powers. But there is one thing which it *does*, *sua sponte*, and which seems an original peculiarity of its own; and that is, always to choose out of the manifold experiences present to it at a given time some one for particular accentuation, and to ignore the the rest. And I shall now show how, from its simplest to its most complicated forms, it exerts this function with unremitting industry.

To begin at the bottom, even in the infra-conscious region which Mr. Spencer says is the lowest stage of mentality. What are our senses themselves but organs of selection? Out of the infinite chaos of movements, of which physics teaches us that the outer world consists, each sense-organ picks out those which fall within certain limits of velocity. To these it responds, but ignores the rest as completely as if they did not exist. It thus accentuates particular movements in a manner for which objectively there seems no valid ground; for, as Lange says, there is no reason whatever to think that the gap in nature between the highest sound-waves and the lowest heat-waves is an abrupt break like that of our sensations, or that the difference between violet and ultra-violet rays has anything like the objective importance subjectively represented by that between light and darkness. Out of what is in itself an undistinguishable, swarming *continuum*, devoid of distinction or emphasis, our senses make for us, by attending to this motion and ignoring that, a world full of contrasts, of sharp accents, of abrupt changes, in a word, of picturesque light and shade.

If the sensations we receive from a given organ have their causes thus picked out for us by the conformation of the organ's termination, the attention, on the other hand, out of all the sensations yielded, picks out certain ones as worthy of its notice and suppresses all the rest. Helmholtz's immortal work on *Physiological Optics* is little more than a study of those visual sensations of which common men never become aware—blind spots, *muscae volitantes*, after-images, irradiation, chromatic fringes, marginal changes of colour, double images, astigmatism, movements of accommodation and convergence, retinal rivalry, and more besides. We do not even know, as Professor William B. Rogers pointed out, on which of our eyes an image falls, until trained to notice the local sensation. So habitually overlooked is this by most men that one may be blind for years of a single eye and not know it.<sup>1</sup>

<sup>1</sup> If one cared to indulge in *à priori* constructions à la Spencer, one might easily show how the differentiation of sense-organs arose in the primitive polyp through this reinforcement by a selective attention (sup-

Helmholtz says we only use our sensations as *signs*. The sensations from which we avert our attention are those which are valueless as tokens of the presence of objective things. These *things* are called the Objects of perception. But what are *they*? Nothing, as it seems to me, but groups of coherent sensations. This is no place to criticise Helmholtz's treatment of perception, but I may say, in passing, that I think his rather indefinite and oracular statements about the part played by the intellect therein have momentarily contributed to retard psychological inquiry. We find the Kantian philosophers everywhere hailing him as the great experimental corroborator of their master's views. They say he has proved the present sensation to have nothing to do with the construction of the Object—that is an original act of the intellect which the sensation merely instigates but does not furnish forth: it contains ultra-sensational elements. All that Helmholtz really *does* prove is, that the so-called Object is constituted of *absent* sensations. What he has not explicitly noticed is, that among these the mind picks out certain particular ones to be more essential and characteristic than the rest. When, for example, on getting a peculiar retinal sensation with two acute and two obtuse angles, I *perceive* a square table-top, which thus contradicts my present image; what is the *squareness* but one out of an infinite number of possible retinal sensations which the same object may yield? From all these the mind, for æsthetic reasons of its own, has singled out this one and chosen to call it the object's essential attribute? Were room here given, I think it might be shown that perception involves nothing beyond association and selection. The antithesis is not, as Helmholtz's admirers would have it, between sensations on the one hand as signs and original intellectual products, materially different from

posed efficacious) of particular portions of the feeling yielded by an organ already nascent. The integument of the animal might, for instance, at first be affected both by light-vibrations and by those far below them. But if the former were picked out by the consciousness as most interesting, the nervous movements would soon grow more and more harmonious with them, and more and more out of tune with the rest. An optic nerve and retina would thus result. One might corroborate this reasoning by pointing to what happens in cases of squint. The squinting eye gives double images which are so inconvenient that the mind is forced to abstract its attention from them. This resolute refusal to attend to the sensations of one eye soon makes it totally blind. It would seem, indeed, that the attention positively suppressed the function of the retina, for the presence of cataract which keeps the image from it altogether, results in no such paralysis. I do not insist on this point, partly because such speculation is rather cheap—"all may raise the flowers now, for all have got the seed"—and partly because there seems some reason to doubt whether the usually received explanation of strabismic blindness be correct.

sensations on the other, as Objects. It is between present sensations as signs and certain absent sensations as Objects, these latter being moreover arbitrarily selected out of a large number as being more objective and real than the rest. The real form of the circle is deemed to be the sensation it gives when the line of vision is perpendicular to its centre—all its other sensations are signs of this sensation. The real sound of the cannon is the sensation it makes when the ear is close by. The real colour of the brick is the sensation it gives when the eye looks squarely at it from a near point, out of the sunshine and yet not in the gloom; under other circumstances it gives us other colour-sensations which are not signs of this—we then see it looks pinker or blacker than it really is. The reader knows no object which he does not represent to himself by preference as in some typical attitude, of some normal size, at some characteristic distance, of some standard tint, &c., &c. But all these essential characteristics, which together form the genuine objectivity of the thing and are contrasted with the subjective sensations we may happen to get from it at a given moment, are themselves sensations pure and simple, susceptible of being fully given at *some* other moment. The spontaneity of the mind does not consist in conjuring up any new non-sensational quality of objectivity. It consists solely in deciding what the particular sensation shall be whose native objectivity shall be held more valid than that of all the rest.<sup>1</sup>

Thus perception involves a twofold choice. Out of all present sensations, we notice mainly such as are significant of absent ones: and out of all the absent associates which these suggest, we again pick out a very few to be the bearers *par excellence* of objective reality. We could have no more exquisite example of the mind's selective industry.

That industry goes on to deal with the objects thus given in perception. A man's Empirical Thought depends on the objects

<sup>1</sup> When I say Objects are wholly formed of associated and selected sensations, I hope the reader will not understand me to profess adhesion to the old atomic doctrine of association, so thoroughly riddled of late by Professor Green. The association of sensations of which I speak, presupposes comparison and memory which are functions not given in any one sensation. All I mean is, that these mental functions are already at work in the first beginnings of sensation and that the simplest changes of sensation moreover involve consciousness of all the categories—time, space, number, objectivity, causality. There is not first a passive act of sensation proper, followed by an active production or projection ("inference") of the attributes of objectivity by the mind. These all come to us together with the sensible qualities, and their progress from vagueness to distinctness is the only process psychologists have to explain. What I mean to say in the text is, that this process involves nothing but association and selection, all new production of either material or formal elements being denied.



and events he has experienced, but what these shall be is to a large extent determined by his habits of attention. An object may be present to him a thousand times, but if he persistently fails to notice it, it cannot be said to enter into his experience. We are all seeing flies, moths, and beetles by the thousand, but to whom, save an entomologist, do they say anything distinct? On the other hand, an object met only once in a life-time may leave an indelible experience in the memory. Let four men make a tour in Europe. One will bring home only picturesque impressions—costumes and colours, parks and views and works of architecture, pictures and statues. To another all this will be non-existent; and distances and prices, populations and drainage-arrangements, door- and window-fastenings, and other useful statistics will take their place. A third will give a rich account of the theatres, restaurants, and public balls, and naught beside; whilst the fourth will perhaps have been so wrapped in his own subjective broodings as to tell little more than a few names of places through which he passed. Each has selected, out of the same mass of presented objects, those which suited his private interest and has made his experience thereby.

If, now, leaving the empirical combination of objects, we ask how the mind proceeds *rationally* to connect them we find selection again to be omnipotent. In an article on "Brute and Human Intellect" in the *Journal of Speculative Philosophy*, July 1878, p. 236, I have tried to show that all Reasoning depends on the ability of the mind to break up the totality of the phenomenon reasoned about into partial factors or elements, and to pick out from among these the particular one which, in our given theoretical or practical emergency, may lead to the proper conclusion. Another predicament will need another conclusion, and require another element to be picked out. The man of genius is he who will always stick-in his bill, as it were, at the right point, and bring it out with the right element—"reason" if the emergency be theoretical, "means" if it be practical—transfixed upon it? Association by similarity I have shown to be an important help to this breaking-up of represented things into their elements. But this association is only the minimum of that same selection of which picking out the right reason is a maximum. I here confine myself to this brief statement, but it may suffice to show that Reasoning is but another form of that selective activity which appears to be the true sphere of mental spontaneity.

If now we pass to the *Æsthetic* activity of the mind, the application of our law is still more obvious. The artist notoriously selects his items, rejecting all tones, colours, shapes, which do not harmonise with each other and with the main purpose of

his work. That unity, harmony, "convergence of characters," as M. Taine calls it, which gives to works of art their superiority over works of nature, is wholly due to *elimination*. Any natural subject will do, if the artist has wit enough to pounce upon some one feature of it as characteristic, and suppress all merely accidental items which do not harmonise with this.

Ascending still higher we reach the plane of Ethics, where choice reigns notoriously supreme. An act has no ethical quality whatever unless it be chosen out of several all equally possible. To sustain the arguments for the good course and keep them ever before us, to stifle longing for more flowery ways, to keep the foot unflinchingly on the arduous path, these are characteristic ethical energies. But more than these; for these but deal with the means of compassing interests already felt by the man to be supreme. The ethical energy *par excellence* has to go farther and choose which interest out of several equally coercive shall become supreme. The issue here is of the utmost pregnancy, for it decides a man's entire career. When he debates, Shall I commit this crime? choose that profession? accept that office, or marry this fortune?—his choice really lies between one of several equally possible future *Selves*. What his entire empirical *Ego* shall become, is fixed by the conduct of this moment. Schopenhauer, who enforces his determinism by the argument that with a given fixed character only one reaction is possible under given circumstances, forgets that, in these critical ethical moments, what consciously *seems* to be in question is the very complexion of the character. The problem with the man is less what act he shall now choose to do, than what kind of a being he shall now resolve to become.

Looking back then over this review we see that the mind is at every stage a theatre of simultaneous possibilities. Consciousness consists in the comparison of these with each other, the selection of some, and the suppression of the rest by the reinforcing and inhibiting agency of Attention. The highest and most elaborated mental products are filtered from the data chosen by the faculty next beneath out of the mass offered by the faculty below that, which mass in turn was sifted from a still larger amount of yet simpler material, and so on. The highest distillate thus *represents* in the last analysis nothing but sensational elements. But this is far from meaning that it implies nothing but passive faculty of sensation. As well might one say that the sculptor is passive, because the statue stood from eternity within the stone. So it did, but with a million different ones beside it. The world as a Goethe feels and knows it all lay embedded in the primordial chaos of sensa-

tions, and into these elements we may analyse back every thought of the poet. We may even, by our reasonings, unwind things back to that black and jointless continuity of space and moving clouds of swarming atoms which science calls the only real world. But all the while the world we feel and live in, will be that which our ancestors and we, by slowly cumulative strokes of choice, have extricated out of this, as the sculptor extracts his statue by simply rejecting the other portions of the stone. Other sculptors, other statues from the same stone! Other minds, other worlds from the same chaos! Goethe's world is but one in a million alike embedded, alike real to those who may abstract them. Some such other worlds may exist in the consciousness of ant, crab and cuttle-fish.

After this perhaps too long analysis let us now look back. We have found that the unaided action of the cerebral hemispheres would probably be random and capricious; that the nerve-process likely to lead to the animal's interests would not necessarily predominate at a given moment. On the other hand, we have found that an impartial consciousness is a non-entity, and that of the many items that ever occupy our mental stage Feeling always selects one as most congruous with the interests it has taken its stand upon. Collating these two results, an inference is unavoidable. The "items" on the mental stage are the subjective aspects of as many nerve-processes, and in emphasising the representations congruous with conscious interest and discouraging all others, may not Attention actually reinforce and inhibit the nerve-processes to which the representations severally correspond?

This of course is but a hypothetical statement of the verdict of direct personal feeling—a verdict declared mendacious by Professor Clifford. But the intricate analysis by which it has been reached gives it great plausibility. I shall strengthen the probability by further facts in a moment. But I beg the reader to notice here the limitations of the power of Feeling, if power there be. All the possibilities of representation, all the images are furnished by the brain. Consciousness produces nothing, it only alters the proportions. Even the miraculous action of free will can only consist in the quantitative reinforcement of representations already given qualitatively. A sonorous plate has no proper note of its own. It is almost impossible by scraping it to reproduce twice an identical tone. The number of Chladni's sand-figures it will furnish is as inexhaustible as the whimsies which may turn up in a brain. But as the physicist's finger pressing the plate here or there determines nodal points that throw the sand into shapes of relative fixity,

so may the accentuating finger of consciousness deal with the fluctuating eddies in the cerebral cortex.

That these eddies are stirred by causes that have no connection with either dominant interests or present impressions seems manifest from the phenomena of dreaming. The chaotic imagery there appears due to the unequal stimulus of nutrition in different localities. But if an accidental variation in nutrition is sufficient to determine the brain's action, what safeguard have we at any time against its random influence? It may of course be reasonably objected that the exceptional state of sleep can afford no proper clue to the brain's operations when awake. But Maury in his classic work, *Le Sommeil*, has conclusively proved the passage of dreams through "hypnagogic hallucinations" into that meteoric shower of images and suggestions, irrelevant to the main line of thought, the continual presence of which every one who has once had his *interest awakened* in the subject, will without difficulty recognise in himself. Ordinarily these perish in being born, but if one by chance saunters into the mind, which is related to the dominant pursuit of the moment, presto! it is pounced upon and becomes part of the empirical *Ego*. The greatest inventions, the most brilliant thoughts often turn up thus accidentally, but may mould for all that the future of the man. Would they have gained this prominence above their peers without the watchful eye of consciousness to recognise their value and emphasise them into permanence?

Nur allein der *Mensch*  
 Vermag das Unmögliche.  
 Er unterscheidet, wählet und richtet,  
 Er kann dem Augenblick  
 Dauer verleihen.

The hypothesis we are advocating might, if confirmed, considerably mitigate one of the strongest objections to the credibility of the Darwinian theory. A consciousness which should not only determine its brain to prosperous courses, but also by virtue of that hereditary influence of habit (nowadays so generally believed in by naturalists) should organise from generation to generation a nervous system more and more mechanically incapable of wandering from the lines of interest chosen for it at first, would immensely shorten the time and labour of natural selection. Mr. Darwin regards animated nature as a sort of table on which dice are continually being thrown. No intention presides over the throwing, but lucky numbers from time to time fortuitously turn up and are preserved. If the ideas we have advanced concerning the instability of a complicated cerebrum be true, we should have a sort of extension of this reign of accident into the functional life of

every individual animal whose brain had become sufficiently evolved. As his body morphologically was the result of lucky chance, so each of his so-called acts of intelligence would be another; and ages might elapse before out of this enormous lottery-game a brain should emerge both complex and secure. But give to consciousness the power of exerting a constant pressure in the direction of survival, and give to the organism the power of growing to the modes in which consciousness has trained it, and the number of stray shots is immensely reduced, and the time proportionally shortened for Evolution. It is, in fact, hard to see how without an effective superintending ideal the evolution of so unstable an organ as the mammalian cerebrum can have proceeded at all.

That consciousness should only be intense when nerve-processes are retarded or hesitant, and at its minimum when nerve-action is rapid or certain, adds colour to the view that it is efficacious. Rapid, automatic action is action through thoroughly excavated nerve-tracks which have not the defect of uncertain performance. All instincts and confirmed habits are of this sort. But when action is hesitant there always seem several alternative possibilities of nervous discharge. The feeling awakened by the nascent excitement of each nerve-track seems by its attractive or repulsive quality to determine whether the excitement shall abort or shall become complete. Where indecision is great, as before a dangerous leap, consciousness is agonisingly intense. Feeling, from this point of view, may be likened to a cross-section of the chain of nervous discharge, ascertaining the links already laid down, and groping among the fresh ends presented to it for the one which seems best to fit the case.

The remarkable phenomena of "vicarious function" in the nervous centres form another link in our chain of circumstantial evidence. A machine in working order functions fatally in one way. Our consciousness calls this the right way. Take out a valve, throw a wheel out of gear or bend a pivot, and it becomes a different machine, functioning just as fatally in another way which we call the wrong way. But the machine itself knows nothing of wrong or right: matter has no ideals to pursue. A locomotive will carry its train through an open drawbridge as cheerfully as to any other destination.

A brain with part of it scooped out is virtually a new machine, and during the first days after the operation functions in a thoroughly abnormal manner. Why, if its performances blindly result from its structure, undirected by any feeling of purpose, should it not blindly continue now to throw off inappropriate acts just as before its mutilation it produced appropriate ones? As a matter of fact, however, its performances become from day

to day more normal, until at last a practised eye may be needed to suspect anything wrong. If we suppose the presence of a mind, not only taking cognisance of each functional error, but able to exert an efficient pressure to inhibit it if it be a sin of commission, to lend a strengthening hand if the nerve-defect be a weakness or sin of omission,—nothing seems more natural than that the remaining parts of the brain, assisted in this way, should by virtue of the principle of habit grow back to the old teleological modes of exercise for which they were at first incapacitated. Nothing, on the contrary, seems at first sight more unnatural than that they should vicariously take up the duties of a part now lost without those *duties as such* exerting any persuasive or coercive force.<sup>1</sup>

There is yet another set of facts which seem explicable by the supposition that consciousness has causal efficacy. It has long been noticed that pleasures are generally associated with beneficial, pains with detrimental, experiences. All the fundamental vital processes illustrate this law. Starvation, suffocation, privation of food, drink and sleep, work when exhausted, burns, wounds, inflammation, the effects of poison, are as disagreeable as filling the hungry stomach, enjoying rest and sleep after fatigue, exercise after rest, and a sound skin and unbroken bones at all times, are pleasant. Mr. Spencer, in the chapter of his *Psychology* entitled "Pleasures and Pains," has suggested that these coincidences are due, not to any pre-established harmony, but to the mere action of natural selection which would certainly kill off in the long run any breed of creatures to whom the fundamentally noxious experience seemed enjoyable. An animal that should take pleasure in a feeling of suffocation would, if that pleasure were efficacious enough to make him immerse his head in water, enjoy a longevity of four or five minutes. But if pleasures and pains have no efficacy, one does not see (without some such *a priori* rational harmony as would be scouted by the "scientific" champions of the Automaton-theory) why the most noxious acts, such as burning, might not give a thrill of delight, and the most necessary ones, such as breathing, cause agony.<sup>2</sup> The exceptions to this law

<sup>1</sup> This argument, though so striking at first sight, is perhaps one which it would be dangerous to urge too dogmatically. It may be that restitution of cerebral function is susceptible of explanation on drainage-principles, or, to use Stricker's phrase, by "collateral innervation". As I am preparing a separate essay on this subject, I will say no more about the matter here.

<sup>2</sup> I do not overlook an obvious objection suggested by such an operation as breathing. It, like other motor processes, results from a tendency to nervous discharge. When this takes place immediately, hardly any feeling but the



are, it is true, numerous, but relate to experiences that are either not vital or not universal. Drunkenness, for instance, which though noxious is to many persons delightful, is a very exceptional experience. But, as the excellent physiologist Fick remarks, if all rivers and springs ran alcohol instead of water, either all men would hate it or our nerves would have been selected so as to drink it with impunity. The only very considerable attempt, in fact, that has ever been made to explain the *distribution* of our feelings is that of Mr. Grant Allen in his suggestive little work *Physiological Aesthetics*; and his reasoning is based exclusively on that causal efficacy of pleasures and pains which the "double-aspect" partisans so strenuously deny.

Thus, then, from every point of view the circumstantial evidence against that theory is very strong. *A priori* analysis of both brain and conscious action shows us that if the latter were efficacious it would, by its selective emphasis, make amends for the indeterminateness of the former; whilst the study *à posteriori* of the *distribution* of consciousness shows it to be exactly such as we might expect in an organ added for the sake of steering a nervous system grown too complex to regulate itself. The conclusion that it is useful is, after all this, more than justifiable. But, if it is useful, it must be so through its efficaciousness, and the Conscious-Automaton-theory must succumb to the theory of Common Sense.

Our discussion might fairly stop here save for the possible difficulty some readers may have in appreciating the full utility of having certain nervous possibilities emphasised above the rest. The measure of all utility is, as we have seen, some standard posited by Desire. The standard of survival or self-preservation is most potent. But there exist a host of other standards, æsthetic and moral, imperative so long as they do not conflict with this one and sometimes imperative over this one. In the preliminary selection by the senses of certain objective orders of movement, it is difficult to see what standard

rather negative one of ease results. When, however, a nervous discharge is checked it is a universal law that consciousness of a disagreeable kind is awakened, reaching in the case of suffocation the extremity of agony. An Automatist may then say that feeling here, so far from playing a dynamic part, is a mere passive index or symptom of certain mechanical happenings; and if here, then elsewhere. It may be replied that even were this true of completely habitual acts like breathing, where the nervous paths have been thoroughly organised for generations, it need not be true of hesitant acts not yet habitual; it need not be true of pains and pleasures, such as hunger and sleep, *not* connected with motor discharge; and even in the instance chosen it leaves out the possibility that the nervous mechanism, now automatically perfect, may have become so by slowly organised habit acquired under the guidance of conscious feeling.



is subverted. The utility of not having a sense for magnetism when we have one for heat, is not obvious. We may at most suspect a possible æsthetic brightness and clearness to result from the wide intervals. But passing by this obscure region we see without the least difficulty why we ignore those ingredients of sensation which are not signs of things. What the peculiarity is in itself which makes Smith's voice so different from Brown's, we need never inquire so long as whenever we hear it we say, "There is Smith". For our practical interest in recognising whom we have to deal with outweighs our interest in the shades of sound *per se*. The selection again of certain attitudes, expressions, &c., in Smith, to stand as characteristic of him so that when others are present we say, "He does not look like himself," and if he is sitting to us for his portrait we spend an hour perhaps in placing him and lighting him so as to bring out with the utmost clearness these selected traits—this selection, I say, is equally explicable by various æsthetic standards, permanency, simplicity, harmony, clearness, and the like. Passing now from traits to *things*, the utility of selection is obviously created and measured by the interests the man has made his own. If Edward never walks out without finding a four-leaved clover, while Oliver dies of old age without having seen one, this is merely due to the fact that Edward has somehow been led to stake his happiness on that particular branch of discovery, and out of a visual field identical with that of Oliver has picked the details that minister to this somewhat arbitrary interest. Granted the interest, we cannot deny the use of the picking-out power. That Edward, having this interest in common with many others, should finally succeed in emphasising certain of those others and suppressing this, would be an example of the utility of selection in the ethical field, supposing always that the new interest chosen were of a higher order and not, like making puns, for example, as trivial an end as the one forsaken.

In the ethical field the importance of choosing one's paramount interest is universally recognised. But it is not so commonly known how, when the interest is once fixed upon, the selective activity must ceaselessly work to detect its presence or absence in each emergency that turns up. Take, for example, an inebriate struggling with temptation. The glass is before him, and the act of drinking has an infinity of aspects and may be defined in as many ways. If he selected the aspect of its helping him to write an article, of its being only lager-beer, of its being the fourth of July, of his needing it as medicine, of his never having formally signed the pledge, of this particular drink "not counting," or else of its giving him the strength to make a much more powerful resolution for the future than any of his

previous ones, or whatever other sophistries his appetite may instigate, he does but accentuate some character really contained in the act, but needing this emphasising pressure of his attention to be erected into its essence. But if, out of all the teeming suggestions with which the liquor before him inspires his brain, respectively saying, "It is a case of this good, of that interest, of yonder end," his mind pounces on one which repeats, "*It is essentially a case of drunkenness!*" and never lets that go, his stroke of classification becomes his deed of virtue. The power of choosing the right name for the case is the true moral energy involved, and all who posit moral ends must agree in the supreme utility of, at least, this kind of selective attention.

But this is only one instance of that substitution for the entire phenomenon of one of its partial aspects which is the essence of all reasoned thought as distinguished from mere habitual association. The utility of reasoned thought is too enormous to need demonstration. A reasoning animal can reach its ends by paths on which the light of previous experience has never shone. One who, on the contrary, cannot break up the total phenomenon and select its essential character must wait till luck has already brought it into conjunction with his End before he can guess that any connexion obtains between the two. All this is elaborated in the article "On Brute and Human Intellect" to which I have ventured to refer the reader. In that article (p. 274) I stated that I had found it impossible to symbolise by any mechanical or chemical peculiarity that tendency of the human brain to focalise its activity on small points which seems to constitute the essence of its reasoning power. But if such focalisation be really due not so much to structural peculiarity as to the emphasising power of an efficacious consciousness superadded, the case need no longer perplex us.

Of course the materialist may still say that the emphasised attention obeys the strongest vibration and does not cause it, that we will what we do, not do what we will,—that, in short, interest is passive and at best a *sign* of strength of nerve-disturbance. But he is immediately confronted by the notorious fact that the strongest tendencies to automatic activity in the nerves often run most counter to the selective pressure of consciousness. Every day of our lives we struggle to escape some tedious tune or odious thought which the momentary disposition of the brain keeps forcing upon us. And, to take more extreme cases, there are murderous tendencies to nervous discharge which, so far from involving by their intensity the assent of the will, cause their subjects voluntarily to repair to asylums to escape their dreaded tyranny. In all these cases of *voluntas paradoxa* or *invita*, the individual selects out of the two possible selves

yielded by his cerebral powers one as the true *Ego*; the other he regards as an enemy until at last the brain-storm becomes too strong for the helmsman's power. But even in the depths of mania or of drunkenness the conscious man can steady himself and be rational for an instant if a sufficient motive be brought to bear. He is not dead, but sleepeth.

I should be the last to assert that the Common-Sense-theory leaves no difficulties for solution. I feel even more strongly than Professors Huxley and Clifford that the only *rational nexus* is that of identity, and that feeling and nerve-tremor are disparate. I feel too that those who smile at the idea of calling consciousness an "organ," on a par with other organs, may be moved by a fundamentally right instinct. And I moreover feel that that unstable equilibrium of the cerebrum which forms the pivot of the argument just finished may, with better knowledge, be found perfectly compatible with an average appropriateness of its actions taken in the long run. But with all these concessions made, I still believe the Common-Sense-theory to merit our present credence. Fragmentary probabilities supported by the study of details are more worthy of trust than any mere universal conceptions, however tempting their simplicity. Science has won all her credit by the former kind of reasoning, Metaphysics has lost hers by the latter. The impossibility of motion, of knowledge, either subjective or objective, are proved by arguments as good as that which denies causality to feeling, because of its disparity with its effects. It is really monstrous to see the *prestige* of "Science" invoked for a materialistic conclusion, reached by methods which, were they only used for spiritualistic ends, would be hooted at as antiscientific in the extreme. Our argument, poor as it is, has kept at any rate upon the plane of concrete facts. Its circumstantial evidence can hardly be upset until the Automaton-theorists shall have condescended to make or invoke some new discoveries of detail which shall oblige us to reinterpret the facts we already know. But in that case I feel intimately persuaded that the reinterpretation will be so wide as to transform the Automaton-theory as thoroughly as the popular one. The Automaton-theory in its present state contents itself with a purely negative deliverance. There is a chasm, it says, between feeling and act. Consciousness is impotent. It exists, to be sure, but all those *manners* of existence which make it seem relevant to our outward life are mere meaningless coincidences, inexplicable parts of the general and intimate irrationality of this disjointed world. What little continuity and reason there seems to be, it says, lies wholly in the field of molecular physics.

Thither Science may retreat and hump her strong back against the mockeries and phantasms that people the waste of Being around.

Now the essence of the Common-Sense-theory, I take it, is to negate these negations. It obstinately refuses to believe Consciousness irrelevant or unimportant to the rest. It is there for a purpose, it has a meaning. But as all meaning, relevancy and purpose are symbolised to our present intelligence in terms of action and reaction and causal efficacy, Common Sense expresses its belief in the worth of Feeling by refusing to conceive of it out of these relations. When a philosophy comes which, by new facts or conceptions, shall show how particular feelings may be destitute of causal efficacy without the genus Feeling as a whole becoming the sort of *ignis fatuus* and outcast which it seems to be to-day to so many "scientists" (loathly word!), we may hail Professors Huxley and Clifford as true prophets. Until then, I hold that we are incurring the slighter error by still regarding our conscious selves as actively combating each for his interests in the arena and not as impotently paralytic spectators of the game.

WM. JAMES.

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## II.—ON DISCORD.

MR. GRANT ALLEN, in his recent book on *Physiological Aesthetics*, adopted the words "maximum of stimulation with minimum of fatigue" as the general formula for the conditions of peripheral stimulation most favourable to pleasure in the case of the higher sense-organs. I wish to point out some considerations which seem to detract from the value and generality of this formula. One obvious objection may be seen at once to be the use of the subjective word "fatigue" for the expression of objective phenomena in physiology: and it is ultimately owing, as I believe, to this dangerous and misleading use that the other weak points in the formula, if such indeed they prove to be, easily escape detection.

To illustrate my first objection, we may take a case or two where the sort of ratio expressed in the formula seems familiar to us. We say, for instance, that a skilful violinist extracts from his strings the maximum of transverse with the minimum of longitudinal vibration; or that mountain-air enables us to walk a maximum number of miles with a minimum of fatigue. In either case the two terms of the ratio are clearly distinct things, which may be conceived as increasing together or decreasing together, or one of which may increase as the other decreases.

Now let us look at the word "fatigue" as used in the formula. It relates simply to physiological facts, to the molecular disturbances of stimulated organs in which wear is outrunning repair, and which are thus being brought further and further from the state they were in to start with, without a chance of recurring to that state during the continuance of the stimulation<sup>1</sup>; a condition whose relation to the condition of stimulation *without* "fatigue" finds a rough parallel in the difference of behaviour of two bodies respectively moved from a position of unstable and of stable equilibrium. But, holding fast to this objective view of the terms employed, we see of course that the need of repair is simply dependent on the amount of disturbance or wear; that the unfatiguing and the fatiguing stimulation are not two distinct things which can be separately appraised, but are *continuous*, one being an excess of the other beyond the line where perpetual repair is possible. So that our formula seems reduced to "a maximum of getting up to the line with a minimum of going over it".

Cases where the formula is really applicable are those where several sets of nerve-fibres are concerned: for instance, we can speak of a surface covered with strips of the primary colours as inducing the maximum of stimulation with the minimum of fatigue; since here, while the eye ranges about, each colour affords a rest to the nervous elements stimulated by the other two; whereas the same surface covered by one of the colours, and stimulating a single set of elements, would cause a maximum of fatigue. Again, by improving the quality of a musical note, that is, by calling into play more nervous elements in response to the additional harmonic vibrations, we increase the general stimulation without making it anywhere excessive. But the case of single and simple phenomena, or single and simple parts of compound phenomena, is of course an entirely different thing; and here the only way in which we can get any scientific conception including the idea of "maximum of stimulation" seems to be by taking into consideration a new term—the time, namely, during which the stimulation lasts, and by substituting for "minimum of fatigue" the maximum of time during which the sensation is pleasant. Take the case of a fine musical note: if this be of only moderate strength, it can be listened to for a good many seconds with satisfaction: if, on the other hand, it be extremely loud, it may be pleasant for a moment, pleasanter perhaps to many people and in some states of the organism than the gentler note, but rapidly becomes almost unendurable. We

<sup>1</sup> "Stimulation" is used throughout in a physiological sense, to express the movements which constitute the response of the peripheral nervous elements to physical stimuli.

may assume then that for any given state of a particular organ a particular period of stimulation has corresponding to it a maximum intensity of stimulation, which constitutes the condition most favourable to pleasure for that period. But the two factors obviously vary inversely<sup>1</sup>; if we increase the loudness of the note we diminish the time during which it is agreeable: and on the subjective side we have very uncertain and limited power of comparing things so heterogeneous as greater intensity and greater prolongation of pleasure; so that, if we ourselves cannot decide in what case pleasure is really most favoured, the physiological conditions most favourable to it become a somewhat indefinite object of search. Our two *maxima*, however, must clearly lie well within the points where, on the one hand, the amount of stimulation would reduce the time of possible pleasurable endurance of it to zero, and where, on the other, the length of time during which it was endurable would imply an almost inappreciable amount of it.

To return to our formula. The use of the word "fatigue" seemed to lead to difficulties; but if we relegate it to its rightful place on the subjective side, there are doubtless feelings connected with the higher sense-organs to which it seems quite fairly applicable; and it is incontestable that the physiological counterpart of these feelings is an excess of stimulation in the organs concerned. But my main objection is of a much more serious kind; since, if substantiated, it connects the lax use of the word, not with a weakness or want of clearness in definition, but with a certain amount of failure in the apprehension and discrimination of facts. It will be best to state at once the point which I wish here to discuss. We find the word "fatigue" used to express the objective counterpart not only of what is *felt as fatigue*, e.g., the too prolonged continuance of a loud note, but of what is *felt as discord*, an ultimate and wholly different sensation. The two objective phenomena agree probably in the general character of wear and tear as the two subjective sensations agree in the general character of unpleasantness: but, the natural supposition being that under this most general head the

<sup>1</sup> They probably vary inversely in a very complex way. For the subjective phenomena, and doubtless therefore the objective, are *graded* as the limiting instant is approached when pleasantness vanishes: and the steps of gradation, and the proportion of the whole time which elapses before the decline sets in, probably differ according to the degree of stimulation; that is to say, with change of stimulation the part of the time during which the sensation is purely pleasant may vary differently from the whole time during which its pleasantness remains above zero. The matter lies quite beyond the reach of experiment, as the subjective facts can never be rendered sufficiently distinct and isolated for accurate examination.



two former differ from each other no less than the two latter, is it not rash to identify them under a common name, when we should never dream of so confusing their psychical counterparts? Discord is not felt the least as fatigue: if then we give the name "fatigue" to the physiological counterpart of discord, are we not likely to overlook the extreme specialty which that particular form of wear and tear (if so it be) must possess, and to rest content with a most imperfect explanation?

It is hardly necessary to remind readers of this journal that the sensation of musical tone is produced by continuous regular nervous stimulation, and that the sensation of discord is due to rapid "beats," that is, to a series of augmentations and diminutions of stimulation interposed in the regular series, and caused physically by the interferences of sound-waves of nearly equal lengths. The separate beats are as little present to consciousness in the pure sensation of discord as the separate vibrations in the pure sensation of tone: the sensation seems quite unique and beyond analysis. The manner of connecting the unpleasantness of the sensation with the theory of stimulation and fatigue is clearly shown in Chapter VIII. of Helmholtz's *Ton-Empfindungen*, which forms a convenient text for the objections I would venture to raise. He points out that a nerve is deadened by strong stimulation, and rendered less sensitive to fresh irritants: a rest, however, enables it to recover its sensibility, and the time of rest necessary in the case of the more delicate sensory organs is extremely short. Now the intermittence which beats cause in the stimulation gives the nerves an opportunity for recovery and repair during each minute period of interruption, and they thus present themselves to each fresh attack of the stimulus in a state of renewed nutrition and irritability. They are therefore subjected to a series of more violent shocks than in cases of unintermittent stimulation, and this violence, as Helmholtz holds, sufficiently explains the unpleasant sensation. He illustrates this position by the case of the eye, pointing out that by looking for even a moment at the sun the sensibility of the retina is so blunted that we see a dark spot when we turn our eyes to the sky; that on coming out of darkness into full daylight we first feel blinded, but the sensibility of our eyes is soon so far blunted that this degree of brightness is found very pleasant; and that so, "by the continuous uniform action of the irritation of light, this irritation itself blunts the sensibility of the nerve, and thus effectually protects this organ against too long and too violent excitement." Intermittent flashes of light, on the other hand, permit fresh renewals of irritability and so act with more intensity, and "everyone



knows how unpleasant and annoying is any flickering light, even if it is relatively very weak".

With respect to stimulation so violent as that caused by looking at the sun, the statement that the blunting of the nerve-sensibility acts as a natural preventive of "too violent excitement" is surely too general. For, though the power of producing the subjective impression of *light* is at once considerably blunted, it would be rash to assume that the peripheral nerve-elements concerned in that impression play no part in the sensation of increasing *discomfort*, which would result if a person's eyes were forcibly kept open and exposed for a few seconds to the direct action of the sun. But anyhow here the stage of possible comfort is instantly passed: that stage in the eye's power of adaptation lies within a certain limit of stimulation. Thus, when the retina encounters ordinary daylight after total darkness, nervous wear outruns repair (that is, on the subjective side, discomfort is felt), until the stored-up superfluity of irritability has run down, so to speak, after which wear and repair go on equally. The stages of the shifting ratio between wear and repair might be roughly illustrated by a steel spring, which will yield and then remain steady under certain weights, but which, if the pressure be excessive, will rapidly pass all the positions of steadiness and snap; the limits of normal and reparable wear, the counterpart of agreeable sensation, corresponding to the steady positions of the spring. Under direct exposure to the sun, the snapping comes, that is, the molecular disturbance far outruns all chance of recovery in an almost inappreciable time. But this would happen whether the sensibility of the retina had been previously blunted or not: let us then neglect such violent cases, which tend to confuse the subject, and confine ourselves to the limits within which regular stimulation is the counterpart of endurable and agreeable sensation, as only here can the problem of intermittence and its effects be introduced.

Now, in trying to connect the unpleasant sensation corresponding to intermittence with *intensity* of stimulation, understood in the ordinary and natural sense, we at once come across a difficulty which is not removed by the undoubted fact that the intermittence enables the nerves in some measure to renew their irritability, and which may be illustrated by the following case:—Suppose that a person with good eyesight reads a book for half an hour by a strong and agreeable light, or looks for the same time at a bright landscape, or merely sits talking in a sunshiny room. The sensibility of his eyes is not to his knowledge affected by the process; for aught he is aware of, the page or the landscape or the room looks as bright at the end of the time

as at the beginning, and the blunting of irritability must at any rate have been very small. Now suppose him to read a book or sit in a room illuminated by a much lower but still sufficient light, and let the light flicker. The discomfort will be very decided; but it seems impossible to make out that the normal kind of stimulation of the end-organs connected with sight is more *intense* here than in the former case. The stimulation has no no doubt been more intense than if the light, instead of flickering, had remained steady at its highest strength: but the light in the first case we considered was very much stronger than this; and in order to make out the intensity of stimulation or molecular disturbance in that first case to be *less* than in the second, we should have to suppose a self-protection amounting to a great and continuous blunting of the power of response to stimulus; and, as this would be represented in consciousness by the reduction of the page or room to darkness long before the expiration of the half-hour, the supposition is contradicted by facts. The subjective feeling of brightness was far greater at every instant of time in the first case than in the instants of greatest brightness, when the nerve-irritability was most thoroughly renewed, in the second: and the subjective feeling of brightness is the concomitant of a high amount of stimulation. It seems illogical then to imagine greater *violence* of stimulation in the second case. The question as regards the eye is complicated by the fact, to which Helmholtz does not call attention, that much of the discomfort caused by flickering is due to the perpetual *muscular* readjustments necessitated by the variations in the strength of the light. But if we agree to neglect this element, the proposed explanation could only pass muster in a case where the light, supposing it to be steady, was as strong as the eye could comfortably stand, in which case making it flicker and so permitting renewals of nervous irritability would send the sensation over the line of discomfort: if we look at a less extreme case, we seem driven to connect the unpleasantness not with *excessive* response of the nerves to stimulus, but with a special feature of *discontinuous* response, whether referable to perpetual stoppings or perpetual startings or both. We need phrases like "violence of stimulation" or "excessive response" (which are both better than "fatigue") to express the excessive molecular disturbances which would be caused by increasing the steady light on the page or in the room till it was disagreeably dazzling: we want another expression for the exceptional order of disturbance introduced by the repeated intermitteces. It is not of course meant that the latter may not be in some way included under the general rule of wear and repair: but it is in itself a quite different species of wear from that

involved in excess of the regular and normal stimulation. A man's frame will need repair after rolling a truck along rails for three hours, and also after setting it going, letting it stop and setting it going again, and continuing this jerky labour for an equal time: but the movements in space and the work done will be very different in the two cases.

When we pass to the ear the problem becomes much simpler and more distinct, for several reasons. First, we get rid of the irrelevant element of *muscular* fatigue, caused by adjustments of the pupil to varying degrees of light. Secondly, the visual intermittences are felt *as such*, and the confused feeling of discomfort may seem fairly describable by the word "fatigue"—especially under cover of the associated muscular feelings, whereby the difference from the normal fatigue caused by excess of light is necessarily much disguised; whereas in discord the intermittences are not perceived as such, but give rise to a new sensation to which no one would dream of applying the name "fatigue". Again, confusion is avoided in the case of the ear by the organ's very limited power of self-adaptation. For the ear seems little liable to anything analogous to being first dazzled (like the eye in emerging into daylight from the dark) and then getting its sensibility blunted to the comfortable pitch which represents equilibrium between wear and repair. Deafness of course ensues from prolonged exposure to excessive sound, but this is owing to real structural injury: and in the case of musical tone,<sup>1</sup> at any rate, I do not think it is ever the experience of a healthy ear to find a single sound intolerably loud for a few seconds, and then to get reconciled to it; whenever it is disagreeably loud to begin with, it gets worse.

Let us now take two means of stimulation for the ear analogous to our former two cases of the strong steady light and the weaker flickering light: they will evidently be a loud single tone or concord, and a soft discord, say a very loud octave and a very soft discord of a semitone, played on a finely-toned organ. The former is of course felt as pleasant, the latter as unpleasant: and in consistency it is sought to connect the former sensation with a lesser and moderate amount, the latter with a greater and violent amount of stimulation. But the actual physical stimulus is obviously very far greater in the case of the loud concord than of the soft discord: the whole burden of the explanation must therefore be

<sup>1</sup> With respect to extremes of non-musical sound, opinions may vary. The getting accustomed to such an extreme, in the sense of gradually becoming able to distract attention from it, hardly implies that the acoustic sensibility has been deadened. Here again it is almost impossible to isolate the phenomena sufficiently for experiment.

thrown on the other factor of stimulation, namely the degree of irritability or molecular instability in the organs concerned. First, then, with respect to the loud concord, in order to make out the stimulation in the case of this, the *greater*, stimulus to be *less* than that caused by the soft discord, we should have to suppose the sensibility or power of response to be very greatly and rapidly deadened: but we have sufficient proof that the nerve-elements are performing their functions in a highly vivacious and persistent way in the fact of our continuing to hear and appreciate the sound for many seconds just as perfectly as we did at first. Secondly, with respect to the discord, we can take this as soft as we please; so that the relation of the perpetually repaired organs to the intermittent stimuli is not analogous to that of an eye brought from darkness into daylight, but brought from darkness into obscure twilight; and in such a case "intensity of stimulation" ought not in reason to outrun the conditions of agreeable sensation. For, looking at our two factors of stimulation, we see that it is only the amount of stimulus which can be indefinitely varied, and there is an obvious limit to the extent to which we can draw on the other factor, that of irritability dependent on nutrition. The perfection of nutrition and repair cannot be more than perfect; it cannot be carried, cannot therefore carry irritability, beyond a certain natural point; so that, however unstable be the condition of maximum irritability, we ought by diminishing the strength of the physical stimulus to be able to avoid causing wear to outrun repair. While, granting of course that the greater the irritability the less the stimulus which will suffice to cause the amount of stimulation corresponding to *unpleasantness*, we still know that the amount of stimulation which normally corresponds to *pleasantness* is a very considerable one: and we cannot postulate the perpetual renewal of such a miraculous amount of irritability as would be required to bring stimulation up to and far beyond this point even under the action of a very weak stimulus. The intermittent stimulus produces, according to Helmholtz, "a much more intense and unpleasant excitement of the organs than would be occasioned by a continuous uniform tone". More unpleasant certainly: but the assumption is that it is more unpleasant simply *by dint of* being more intense, however soft the sound, in face of the fact that more intense excitement still, caused by a much greater stimulus acting regularly on organs which are proved by the concomitant sensation to remain perfectly responsive and undeadened, is felt as pleasant. And over and above all this, if it *were* more intense in the manner imagined, it ought to be felt as *loudness*: "loudness," as Mr. Grant Allen himself remarks in one place,

"is the subjective concomitant of intensity in stimulation". And the sensation of loudness has absolutely no relation to that of discord, which retains its unique character even when barely audible.

In this connexion I may quote an illustration given by Helmholtz, which seems to me delusive. He says, "If a tuning-fork is struck and held at such a distance from the ear that its sound cannot be heard, it becomes immediately audible if the handle of the fork be revolved by the fingers. The revolution brings it alternately into positions where it can and cannot transmit sound to the ear, and this alternation of strength is immediately perceptible by the ear. . . . Just as this alternation of strength will serve to strengthen the impression of the very weakest musical tones upon the ear, we must conclude that it must also serve to make the impression of stronger tones much more penetrating and violent than they would be if their loudness were continuous." No doubt a change or movement serves often to direct attention to feelings which when uniform were too slight to be noticed: a change even to a lesser degree of stimulation might have this effect, if the attention had got deadened by the monotony of a prolonged impression. But the change here described by Helmholtz would be consciously perceived as a *change of loudness*. In just the same way, with a very much greater strength of tone, if the alternations were slow enough to be perceived as separate, they would be recognised as alternations of loud and soft sound, the loudness unless very extreme being in no way unpleasant. Now by artificial means we can introduce into a single continuous tone, that is, into a simple series of regular stimulations, an intermittence similar to that produced by natural interference in the compound series, whose counterpart in consciousness is the sensation of two discordant tones. Let us then, by way of getting a new point of view, suppose the alternations to get faster and faster till they merge in consciousness into one continuous sensation. What quality or qualities should we expect this sensation to have? We know that there has been no change in the nature and amount of the respective physical stimuli as they gradually got crowded nearer together: *a priori* therefore we find no reason to suspect much change in the nature and amount of the physiological response to each of these stimuli: and hence we should expect that the psychical representative of this response would continue to be the sensation of loudness up to the end of the process. And such we find by experiment to be the case: the quality of loudness remains when the sensation has become single and unintermittent. But experiment reveals another quality which we could not have predicted: the sensation is not

one of loudness only, but is distinctly unpleasant and jarring. Again, if we made the experiment with a soft sound, the rapid alternations of strength, when merged in one sensation, could only bring its loudness up to the low level of what were its louder parts when it was felt as intermittent; but the same jarring quality would be experienced as in the other case. And just so discords, when soft, give a sensation which is not "penetrating and violent," but disagreeable in a special and unique way. The following consideration may set the difficulty in a still clearer light. A continuous low note, having say 120 vibrations to the second, is pleasant: a higher note of equal apparent strength with several thousand vibrations to the second, having its regular series of vibrations interrupted 120 times every second, is unpleasant; so is a discord of two high notes with the same number of beats and interruptions. But here the periods given to the nerves for renewal of irritability are *equal in number* in the two cases of the unpleasant and the pleasant sensation. What right then have we to account for the contrast by speaking of the stimuli as "wastefully attacking the fibres and end-organs concerned" (to quote Mr. Grant Allen) in the one case, and as blunting and so protecting them in the other?

I will adduce only one more argument. If the same kind of stimulation, when excessive, caused the unpleasant sensations both of over-loudness and of discord, those who are able to experience one ought, under the appropriate conditions, to agree in experiencing the other. But it is very common to find that of two persons who are equally susceptible of annoyance from over-loudness one is keenly sensitive to discord and the other totally unconscious of it.

To sum up. The disputed view, when clearly drawn out, implies variety in *degree*, but not in *kind*, of the stimulation proper to the several end-organs. This stimulation is felt as pleasant up to the point at which nervous wear begins decidedly to outrun repair; when it is felt as unpleasant this point has been passed. The point itself is supposed to be the resultant of two factors: one is the amount of the physical stimulus, which must be called excessive, in relation to a particular state of the organs, whenever the action cannot last for an appreciable time without seriously disturbing the balance between wear and repair: the other is the degree of nutrition and consequent molecular instability in the organs concerned, which must be called excessive, in relation to a particular amount of stimulus, if discomfort is experienced under the action of an amount of stimulus which at other times may be found quite pleasant. We took cases where one sensation was pleasant and another unpleasant, in spite of much greater violence of stimulus in the



former case: and to account for this according to the theory recourse was inevitably had to the second factor—the irritability of the nerves, supposed to be deadened in the former case, perpetually revived in the latter. We objected to each feature of the explanation: to the *deadening* in the case of the continuous tone or concord as being contradicted by the continued vitality of the subjective feeling; to the *revivification* in the case of the discord ( $\alpha$ ) as needing often to be miraculous in degree in order to account for the facts, ( $\beta$ ) as bound, so far as it did occur, to produce the normal concomitant of intensity of stimulation—loudness, and not something quite different. Next, we found a case where a pleasant and an unpleasant sensation were produced under conditions which, as regards opportunity for renewal of irritability, were identical. Finally, we showed that, whereas sensations depending on precisely the same physiological facts ought to be equally awakenable under the appropriate stimuli, cases were common where one was so awakenable and the other not. We seem thus driven to assume the existence of some other *kind* of nervous disturbance, connected specially with interruptions supervening on a mode of motion which has been sufficiently established to become, so to speak, familiar. We find an illustration, perhaps even a true analogy, in the effect of interruption of any regular rhythm which is being watched by the eye or ear, or produced by our own voluntary muscular actions. In this comparison whole sense-organs, and actions slow enough to be consciously and completely followed, take the place of the infinitely minute nervous elements and infinitely rapid movements we have been considering. And here we assuredly should never think of accounting for the unpleasant sensation by “intensity of stimulation,” the feeling of being balked and disappointed being totally different from that of over-strain or fatigue; not more different, however, than is the feeling of discord from the oppression of excessive sound. If the new and special phenomenon, in either the illustrating or the illustrated case, is to be brought on the objective side under the general rule of wear and repair, it must probably be by supposing energy to be stored up ready for discharge, which, when the regular and established stimulus does not come, is discharged unnaturally, so to speak, and against resistance: as Mr. Grant Allen well expresses it with regard to rhythm, “if the opportunity for the discharge is wanting, the gathered energy has to dissipate itself by other channels, which involves a certain amount of conflict and waste”. If the suggested analogy be applicable, we may imagine the new phenomenon of discord to appear in consciousness as soon as the frequency of the baulkings, or whatever we are to call them,



has become sufficient to bring this sort of conflict up to a certain pitch of intensity.

I may just remark, in passing, that this case of discord serves well to illustrate in how extremely small a degree considerations of peripheral nerve-stimulation can really penetrate into the secrets of artistic beauty. A discord is always a discord wherever it occurs, and has the same wearing effect on the peripheral organs: but the action of the higher co-ordinating centres so overrides the natural character of the sensation as to convert it into an all-important feature of modern music, the simplest bit of which is often crammed with discord.

A few words may be added on the subject of colour-discord. To put a simple case: why is immediate juxtaposition of orange and vermilion on one surface disagreeable? Mr. Grant Allen tries to bring such facts under his general formula on the ground that the same class of optic fibres is stimulated by each of the two colours, and that over-stimulation therefore ensues. But if the orange part were vermilion, like the other, stimulation of the same class of optic fibres would be carried still further and a still greater degree of over-stimulation would result, whence we should logically expect an intensification of the same subjective feeling. This objection is in fact the one which Mr. Sully made in his review of Mr. Allen's book in this Journal, and his *reductio ad absurdum* was perfectly sound, that "it would follow that the same colour spread over a large surface would produce the pain of chromatic dissonance in its maximum degree". To this Mr. Allen replied that though all dissonance is fatigue, all fatigue is not dissonance. No: but even if we could conceive for the moment that the lesser stimulation, being still excessive, was cognised as a special form of discomfort—*colour-discord*, while the more excessive stimulation was cognised as the normal discomfort known as *fatigue*, what are we to say if we find a case where the feeling of the lesser stimulation answers to the above description, but the feeling of the greater is not fatigue but *pleasure*? If "fatigue" is one in kind (as the old formula and the arguments in support of it throughout imply), how will Mr. Allen explain the fact that we are annoyed by a mixed mass of pink and scarlet geraniums, but are pleased by an equal mass of the flowers when they are all scarlet, seeing that the conditions are more favourable to "fatigue" in the latter case? He adds: "What would Mr. Sully say to a person who argued that on Helmholtz's principles one and the same note continued for a long time would produce in the maximum degree the pain of musical dissonance?" But this remark, proposed as an absurdity, really suggests the very difficulty which I have found in accepting Helmholtz's principles of musical dissonance as

complete: and indeed the remark has its exact parallel and converse in the argument which forms the gist of the present paper. I have argued that, on the theory that stimulation is one in kind and only varied in degree and is completely expressible in terms of intensity, it is impossible to explain how it happens that its subjective concomitant in certain cases is an impression not of loudness but of discord: conversely, had I taken discord as the chief and central phenomenon, the fact with which I should have confronted the theory would have been that the feeling of the stimulation due to a loud continuous note is unaccountably not discord but loudness. The above remark proposed by Mr. Allen may in fact be used as a *reductio ad absurdum* of the view he adopts on musical discord exactly parallel to Mr Sully's *reductio ad absurdum* of his view on colour-discord. Mr. Sully, after his criticism on this point, adds: "We do not say that these disagreeable combinations may not be brought under such a principle of painful stimulation as that laid down by Mr. Allen, but if so, it must be effected in quite another way." This appears to me to be a suggestion parallel in kind to that advanced above as to the supervention, in cases of intermittent nervous stimulation, of some special kind of dissipation and disturbance: but if such facts really exist in the case of discordant colours, they are probably of a much more obscure kind, since they can hardly depend on anything so simple as interruptions of an established rhythm.

Two further considerations may be mentioned which tend to discredit the view that "fatigue" or excess of normal stimulation is a sufficient explanation of colour-discord. First, to return to our example of vermilion and orange, the special unpleasantness ceases when the one is made to shade off into the other: and yet here again the same optic fibres are used to a greater extent, as the eye passes and repasses along the surface, than when it was more restrictedly occupied with the dividing line where the two colours lay side by side without gradation. Secondly, the briefest time will suffice for the unpleasant sensation to be felt. This is an objection which we are precluded from urging in the case of note-discord, because there the "fatigue" was connected with intermittences of which a large number occur in a second: but colours, however discordant, cause no such intermittences, and the "fatigue," if such it be, ought in reason to grow by gradual and sensible degrees, just as it would in the case of a single bright colour when looked at continuously. All things considered, one is led to guess that the extent to which explanations resting on peripheral nervous conditions apply to sensations of colour-discord and concord must be very limited. They may cover, for instance, such broad effects as the obviously

resting action of complementary colours, which affect different fibres: but one seems more and more driven to refer the more delicate shades of feeling to associational and intellectual elements. This must be the case even with single colours which are not bright, stimulating or fatiguing, and can be looked at for a long time without serious discomfort, but which are simply ugly. Again, it is impossible to abstract the colour from the object; and even beautiful colours displease us in inappropriate and unusual positions. Such associations, however, as we can consciously discover will often be found provokingly insufficient if pressed as explanations. For instance, the pleasantness of the gradation from bright red to orange, as compared with their immediate juxtaposition, might perhaps suggest a connexion with the frequency of such gradation in nature, as for example in sunsets. But then we also continually find in nature a total absence of gradation in nearly related tints whose juxtaposition is nevertheless felt to be delightful; as in looking at a light blue sky through blue-green leaves. And indeed a slightrness of divergence in colours often seems the essential feature of their *harmony*; whence a new difficulty in accepting as final and complete the view that "those combinations produce discord which successively stimulate the same class of structures". And these experiences of colour-effects often occur in isolated acts of observation without any relation to surrounding conditions; so that they cannot possibly be explained on the same grounds as the presence in music of sound-discords, which are enjoyed as parts of a complex and *organic* whole. Such considerations are almost enough to make one despair of anything like an exact and complete *rationale* of colour-discords and affinities: it would at any rate lie far beyond the scope of any conceivable formula.

EDMUND GURNEY.

### III.—THE DIFFICULTIES OF MATERIAL LOGIC.

IN a notice of Mr. C. Read's *Essay on Logic*, published in MIND XII., some remarks were made upon the possibility of a purely objective treatment of the science. There was not then space for an adequate discussion of the subject, but it seems sufficiently interesting and important to deserve fuller examination.

That neither Logic nor any other science can possibly be regarded as being out of relation to the human faculties, we are presumably all agreed. Its necessary relativity, in this sense, is universally admitted. Things are what they are to our facul-

ties; their attributes are at bottom merely certain ways in which they affect us. Objectivity in this sense and under these restrictions is of course not confined to Logic, but is common to every physical science. In the physical sciences it is assumed so much as a matter of course by all investigators and expounders that it is seldom considered necessary formally to enunciate it. In Logic alone it deservedly obtains more explicit recognition; partly because traditional feeling and associations had for the most part conspired to give another aspect to the treatment of the question, and partly because in any abstract or universal science philosophical inquiries become appropriate which would be very much out of place in the hands of more special investigators.

The best exposition perhaps of this view, in a few words, is that of Mr. H. Spencer, who draws the following distinction between the Science of Logic and the Theory of Reasoning:—"The distinction is, in brief, this, that Logic formulates the most general laws of correlation among existences considered as objective; while an account of the process of Reasoning formulates the most general laws of correlation among the ideas corresponding to those existences."

That the view of Logic in which it is regarded from the objective standpoint instead of from that of the conceptualist, is the essentially sound view, I most cordially recognise. It seems indeed to me that nearly all the interesting and valuable additions that the science has received at the hands of Mill, Mr. Bain, and Mr. Spencer himself (to say nothing of others), have originated in the more or less consistent adoption of this mode of treatment. But still this view as expressed by Mr. Spencer seems to me rather an ideal towards which we are to aim, than a goal which we can consider ourselves to have attained. The sense in which this remark is to be understood must of course be gathered from the general substance of this article, the object of which is to point out that if we were to adhere rigorously to this objective view, we should be forced into one or other of two alternatives. Either we should have to support our position by the aid of conventions and assumptions, the number and importance of which have never been sufficiently realised, or we must make room for a *third* science which will have to stand somewhere between the two mentioned above by Mr. Spencer, and which will contain a very large portion indeed of the material which has most educational interest and value, and which has always gone by the name of Logic.

To prevent any possibility of misunderstanding, as we are forced to use somewhat ambiguous words, it may not be amiss just to remark that the objectivity here referred to does not in

any way imply acquaintance with more than phenomena. The contrast before us here is not that between things in themselves and things as presented to us, but merely between the more perfect and accurate knowledge of them and the less perfect and accurate. My knowledge of the 'thing' is very inaccurate and defective; this imperfect presentation of it is my conception or idea of it, and we term it subjective. But suppose this knowledge, always within the range of phenomena, developed and perfected to the utmost attainable degree; let it be determined with all the accuracy which present or future methods of measurement may invent; let this knowledge receive the final and general assent of mankind,—and we should then have obtained what we may call objective knowledge. We should know the thing itself as well as beings with faculties at all resembling those which we possess could ever hope to know it. In a word this knowledge thus rendered final and general *is*, for all practical and speculative purposes, the same thing as the sum-total of "existences considered as objective" which, according to the above extract, is to be regarded as the subject-matter of Logic. This is the sense in which I presume that the objective existences with which Logic has to deal would be understood by most writers at the present time; it is certainly the sense in which they will be understood in this essay.

It is obvious enough to every one that any such attainment as this of objective knowledge is at present indefinitely remote. But the bearing of this state of things upon the practical treatment of our system of Logic has never, so far as I know, been systematically worked out. Few persons, I imagine, have an adequate conception of the number of assumptions, or at least of conventions, which are forced upon us at one point or another if we wish to render our system consistent and homogeneous.

One of the earliest occasions upon which we thus have to decide a convention is in connexion with the *existence* of the objects which we name. This is forced upon our notice directly we discuss the denotation of names in an objective system of Logic. Names, we are told, are the names of things, not of our ideas of things. This is all plain enough in the great majority of cases, for the sharp distinction between the thing and our mere idea of it corresponds well enough with the equally sharp distinction between what is universally accepted as existing and what is universally rejected as such. But then what an amount of summary legislation is needed to sweep away all the intermediate shades of truth and certainty, and to leave nothing but plain black and white. Three hundred years ago the dragon and unicorn were 'things' in this sense, and the

black swan was not; now their positions are reversed. Is the sea-serpent a thing?

It is not for a moment suggested here that difficulties of this kind are of any very serious nature in principle, but merely that they mar the symmetry of our system by demanding conventions which the pure theorist would gladly avoid. The conceptualist logician is not troubled by them, for the only denotation of a name which he cares to entertain is a potential one, but the opposite party cannot thus evade the question. Those who say that names are the names of things, who support this decision by a pointed distinction between real and imaginary names, and regard the definitions of these as having respectively different interpretations, *must* have an opinion—not necessarily as to the limits of any given denotation, but at least—as to whether there really be any denotation or not. Thus as to the ‘existence’ of these doubtful or disputed things. Beyond all question they do exist or not. Some day we shall have made up our minds on every point of this kind, and may find it advisable to print, say, the names of all imaginary things in italics so that the simplicity of early youth should never be misled by the creation of wrong associations. But meanwhile, since we do not know, that is, cannot agree finally amongst ourselves which of these two alternatives is true, we are forced into a difficulty. Either we must give up our doctrine that names stand for things; or we must admit that a ‘thing’ need have no actual existence; or we must, by an exercise of summary jurisdiction, decide from time to time what does and what does not exist; or we must exclude from Logic all consideration of names and their significance. The first of these alternatives would be tantamount to abandoning our case, as it would so far imply adhesion to that subjective view of Logic which we are supposed to reject. The second would soon lead to an overwhelming invasion of mythical and fanciful objects. The gradations between what was once universally accepted; what was accepted by a large party; by the thoughtful few; invented consciously by some but believed in by others; believed in by the ignorant generally, by particular sects, by a few and so on,—are far too refined to admit of appreciation. If, for instance, we opened the door so as to admit within the denotation of ‘animal’ any creature whose existence was affected by the slightest doubt, we should find it hard to shut it till they had all effected their entrance, not the dragon only, but all his congeners down even to the Jabberwock and the Snark. The fourth of the above alternatives would doubtless save all trouble of this kind, but he would be a bold logician who should attempt to treat Logic after he had ridded it of names. The remaining alternative is



really the only one available. We have to rule, from time to time, that such and such things do exist, and that others do not; and we have to do this with the decisiveness of a judge who feels that a definite settlement of the question is far more important than a settlement in accordance with strict justice. That is, we have as logicians, when asked to declare what is the denotation of any term, to draw a clear line dividing entities into the real and the imaginary, and to forget that any such arrangement is altogether relative, not merely to the age in which we live, but in some respects to the society with which we happen to mingle.

The difficulty just mentioned may seem to have risen mainly from that perversity or indolence of men which would continue to invent and believe in such multitudes of fictitious entities as to have done a good deal towards obscuring the very distinction between truth and falsehood. But we must notice another now, which arises from the constitution of things rather than from our folly in looking at them. Take the case of a class-name, where the existence of the objects corresponding to that name is unquestioned. What objects exactly does it apply to or denote? All that possess the attributes implied by the name? True, but not enough: it will be almost universally admitted that we must extend this denotation so as to include all the objects which ever have, or ever will come, under the name; for not so to extend it would be to introduce a very narrow degree of relativity indeed, and to make the application of the name changeable from instant to instant. But then what if these attributes undergo a change in course of time, as all must admit to happen within limits in certain cases, and as every evolutionist will claim to happen without limit in almost all cases? The name cannot then apply to every individual in the indefinite succession of objects, but only to a certain number out of the whole succession, that number being greater or less according to the rapidity of change in the type. But then what we may call the centre of the limited selection which is thus forced upon us is necessarily determined by the accident of our position in time, and accordingly is relative to this. The total range of applicability of the term 'horse,' for instance, is not coextensive with the whole ancestry and posterity of the present animals so called, but can only be regarded as extending a certain way backwards and forwards in time. At what points then does it stop short? At points determined by a two-fold relativity: first, that depending upon the magnitude of variability which we are prepared to admit as being covered by the term. This decides, so to say, the *length* of the piece which we cut out and retain from the infinite succession. Then, secondly, there



is that which depends upon the particular point of the stream opposite which we logicians happen to be standing at the present time. This decides, so to say, the position of the *centre* of the piece thus selected.

The points above insisted upon may seem to some, when thus stated in their generality, to be somewhat fanciful and over-refined. But they will soon cease to seem so when it is pointed out how seriously their decision, one way or the other, affects a number of the details of his science with which every logician is bound to occupy himself. We will examine some of these details successively without troubling ourselves much about the exact order in which we take them.

The formal logician, of course, recognises no distinction between the potential and the actual constituents of a class; or rather, being occupied with the form and not the matter, it is no concern of his whether there really be any such constituents. In every subdivision therefore of classes produced by dichotomy or otherwise, he regards each compartment as equally occupied in a logical sense, because we may conceive objects possessing the requisite particular group of attributes. Similarly he maintains that connotation and denotation must necessarily vary together, because any alteration of the number of attributes taken into account corresponds to a potential variation in the range of application of the name. On both of these points the objective logician is apt to take him to task, on the ground that he is neglecting the teachings of nature: that he ought not to try to fill his class-compartments unless he can actually find the wherewithal to put into them; that he must not assume that the more the attributes taken into account the fewer will be the things possessing them, unless he has actually ascertained that in the cases in question nature does not group her attributes in bundles of her own selection, the whole bundle being present or absent together. But surely, if we insist upon his carrying out his own view with rigorous consistency, we should find that both these grounds of objection fail from beneath him. The entire range of denotation must be regarded as almost infinite, since it is not restricted to present existences. But, clearly, when we assign an infinite range, the actual and the potential become much about the same thing. According to well known results of the Theory of Probability, to say that anything is possible, or that it may happen, is equivalent to saying that (within the scope of sufficiently extensive experience) it is occasionally actual, that there are circumstances under which from time to time, however rarely, it does happen. And, apart from that Theory, it is clear that almost all negation is made under certain conditions of time and space, which will be evaded by

sufficiently extending our range. Accordingly hardly any subdivision of the possible is doomed to be eternally empty. The utmost we dare say is that it is unfilled at present, and will be found to be unfilled within a reasonable range about the period occupied in time by us of the present day. With this relative restriction our arrangement will hold well enough.

Turn now to examine some of the corresponding questions which suggest themselves in the case of Propositions. We shall find ourselves encountered here not only by the difficulties already touched upon under the head of Terms, but also by some additional ones as well. They are the difficulties which inevitably attend upon us when we are discussing by implication the existence of things, even when that existence is merely of the phenomenal kind with which alone we are here concerned. When, for instance, we say that 'All A is B,' do we imply the existence of A and of B? Certainly we do; for otherwise the proposition would not be a true one; or rather, by not saying that existence is implied, we should be losing our hold of that distinction between truth and falsehood, between well- and ill-grounded belief, which it is the main prerogative of an objective Logic to keep clearly before us. Now take a negative proposition, 'No C is D': how about the existence of C and D here? It is clear that C must exist, for otherwise there would be no meaning in denying D of it. But then this leads at once to the admission of the existence of D also, unless we abandon the right of conversion, for at any time by simple conversion we might change D from predicate into subject. And this has further implications if we claim our undoubted right to contraposit a proposition. From 'All A is B,' we obtain at once 'No not-B is A'. Is this legitimate? If it is, then we draw the conclusion that every term in a true and lawful proposition has something existent corresponding not only to it, but also to its contradictory as well. Experience of course would not quite justify us here, for take the proposition 'No object possesses a temperature below 280° C'. The very meaning of the proposition denies the existence of its predicate.

It is clear therefore that what we really do is to take a licence or make a convention for convenience sake. If we chose to adhere to our strict logical view with punctilious accuracy, we should have to lay down our rules somewhat as follows:—In an Affirmative Proposition the subject and predicate distinctly imply the existence of their objects; but, as we must appeal to experience to make sure of the existence of their contradictories, we have no right without due inquiry to contraposit such a proposition. In a Negative Proposition the subject must exist, but not necessarily the predicate (for negation does not carry exist-

ence with it). Accordingly we have no right without due examination even to convert a negative proposition.

There is a confirmation of this afforded by the doctrine of the Quantification of the Predicate. If there is any one who ought not to have adopted this doctrine, I should say that it was Hamilton, as it peculiarly belongs to the objective view. If we look to the subjective side, I should say with some confidence that we do not as a rule quantify the predicate, and with still greater confidence that we ought not to do so. In certain exceptional cases the form of the sentence decides this point, but in general there is nothing in the form to show whether we are referring to the whole or a part of the predicate; if therefore we render this quantification definite, we are outstepping our data unless we make a renewed appeal to experience. Objectively considered, of course, the subject is or is not coextensive with the predicate, but we have no means at the time, without a daring assumption, to decide which of the two alternatives is true. This comes out very clearly when we adopt Euler's symbolic method of representing propositions by means of intersecting or including circles. This being a representation of the relations to one another of the things themselves and not of our probably imperfect conceptions of them, we *cannot avoid* quantifying our predicate by the way in which we choose to draw our circles; though we often try to avoid committing ourselves by the subterfuge of drawing lines only dotted in part.

Turn now to the consideration of Hypothetical Propositions. Rigorous consistency ought, I suppose, to exclude them from an entirely objective Logic. Their real *differentia* is to express human doubt; where certainty is felt, no 'if' could have a right of entry. Doubt clearly affects the subject only, and has no relation to the object. 'If men were prudent their meals would be frugal'; this sentence when duly objectified is turned into 'all prudent men eat frugal meals'. Logically the two statements are identical, except in so far as the former gives expression to a certain tinge of doubt as to whether any men of that degree of prudence do exist. If we know that they do exist, the logician ought by rights to employ the categorical form; if we know that they do not, then he has no right to utter the proposition within the domain of a science whose function it is to express and accumulate truth and certainty.

Will not this consideration, by the way, help to clear up the frequently expressed doubt as to whether the so-called hypothetical reasoning is or is not really inference? 'If A is B, then C is D; but A is B; therefore C is D.' What probably gives rise to the opinion that there must be inference here is the conviction that the supposed premisses and conclusion are

not the same thing exactly, whence it seems to follow that one must be inferred from the other. That they are not exactly the same must be admitted, but the only difference appears to me to lie in the fact that the premiss expresses a relation affected by a doubt, whilst the conclusion expresses it without a doubt. Of course, if the removal of this doubt depended upon anything within the limits of the given propositions this would amount to reasoning; but it is not so, the doubt being clearly removed from some extraneous source. It is merely as if we said, 'I think A is B,' and then, owing to the intervention of some information or observation, corrected ourselves by saying, 'Certainly A is B'. Nothing would be thus added to the contents of the proposition, but there would merely be, from some extraneous source, a gain of certainty in entertaining it. So with our hypothetical reasoning above. If we had no doubt about the truth of our premiss, we ought not strictly to have put it into the hypothetical form, but to phrase it 'Every time that A is B, C is D,' or in some such form. The conclusion is then obviously no reasoning, but either the repetition of the same fact over again (if we say generally 'A is B') or of a part of the same fact (if we say particularly 'This A is B'). In the former case it is merely restatement, and in the latter it is one of those partial restatements termed immediate inferences.<sup>1</sup>

Such a result as the above ought not to surprise us, for it is surely only natural that anything which has to do with doubts entertained by us about objective facts (the essential characteristic of all hypothesis) should in strictness be excluded from a thorough objective treatment of Logic, and, for that matter, from a thorough conceptualist treatment also. From the former it is excluded because the facts themselves being certainly one way or the other, the doubt about them must be purely subjective and relative; from the latter it ought to be equally excluded, because our mere notions when uncorrected by appeal to fact can never have that experimental certainty which is the necessary contrast to hypothesis. The distinction between fact and supposition is equally lost whether we regard all or nothing as

<sup>1</sup> There has been too much discussion of the nature of Hypotheticals for the above remarks to be regarded as anything more than hints for the readers of this Journal. The Editor in a former number (No. IV, p. 216), drew a distinction between the 'if' of doubt and the 'if' of inference. That this distinction exists practically, that is, that we frequently throw into the form of a hypothesis propositions of which we entertain no doubt, I should fully admit and maintain. But it will readily be seen that what I am discussing above is rather the position and function of these 'ifs' under a system of rigid stringency, than the uses to which we put them under ordinary circumstances.

fact, whether we look only to the things or only to our notions about them.

That any theory of Definition must stand in need of a considerable amount of assumption or convention is only too obvious, but I think that the nature and significance of this assumption is constantly underestimated. The definition of a term, it will be commonly agreed, is the enumeration of its essential attributes; that is, of the attributes connoted by the term. But when we ask, What *are* the attributes so connoted? we get into a difficulty. These attributes regarded in themselves are of course indefinitely numerous; even the number of those which distinguish one class from a neighbouring class are often too many for enumeration. We are obliged therefore to take a limited selection of them to comprise the connotation. How important is the nature of this selection, for logical purposes, will be seen at once when we consider that the entire decision of the mutual relations of genus, species, difference, property and accident, as well as the distinction between essential and accidental propositions, all turn upon the meaning we assign to the 'connotation' of a term.

It appears to me that the only tenable course is to admit at once that the connotation is determined by conventional agreement as to what are the attributes in question. This convention of course is not an arbitrary one, but rests upon what is generally considered to be the 'importance' of the attributes. This is clearly a relative and provisional interpretation; for the convention will never obtain universal adhesion, but will depend mainly upon the opinions of the well-informed, and it will inevitably change from time to time under the impress of varying theories and gradually advancing knowledge.

It needs, I think, but little inquiry to convince us that a purely objective interpretation of the connotation is impossible. Let us examine some of the attempts in this direction. We need only notice, to reject, the statement that the essence of a thing is 'that without which it would cease to be'; for what sort of injury a thing can undergo without fatal consequences will depend upon its own toughness of constitution. The statement is really nothing but a somewhat realistic paraphrase for the much more rational one 'that upon the loss of which we should cease to apply the same name'. A far more plausible account is given by saying that the essential attributes (that is, the connotation) comprise those primary qualities from which the others may be deduced. There are, however, two objections to this. In the first place it does not meet the very common case, of which the species of Natural History are an instance, wherein a number of attributes seem to stand each on its own

independent footing, so that we cannot point to a few of them as being the source and origin of the remainder. But there is another important objection behind, which will perhaps need some exposition. What is called dependence often means merely dependence by inference, not by physical consequence and succession; in other words, a subjective not an objective dependence. Dependence by inference is clearly relative not merely to the amount of knowledge of the age, but to the theories in accordance with which that knowledge is grouped and arranged. It is very possible that by a change of point of view in science two attributes should each shift into the place of the other in this respect, so that that which was at one time the dependent one becomes, by the new mode of treatment, the independent one. Every one can see, by reference to works of different dates, how decidedly this is the case in Geometry and Mechanics. In fact it presents itself as a practical difficulty to the examiner that propositions, which on one mode of treatment are simple corollaries, perhaps even axioms, are on another mode only obtainable after several steps of deduction. What, to take one simple example, is the independent, and what the dependent, characteristic of parallel lines?

If it be urged that the Natural Kinds of Mill afford a strictly objective specific distinction, the first answer would be that even were the existence of these kinds admitted, they would only partially meet the difficulty. It will hardly be contended that they can be sought for except amongst the species of Biology or amongst simple substances; and in each of these departments they are having to undergo a criticism which will sorely try them. In the one case they have to settle accounts with the Darwinians and in the other with the molecular theorists, and from neither party are they likely to find much mercy. Even if we confine our attention to the present time, without projecting our vision towards the changes indicated in the remote past or future, we shall find that the considerations suggested above cannot be neglected. Those present distinctions between one species and another are undoubtedly deep and important, and it is absolutely necessary to recognise them in any system of classification; but it appears to me that Evolution, once admitted, tends not merely to erase these distinctions in the remote distance, but also to shed a light upon them in the present which greatly modifies their significance. Grant to the fullest the objective nature of the distinguishing attributes themselves, yet their relative 'importance,' and therefore the particular selection to be made from amongst them for purposes of definition, must depend upon subjective considerations. Not merely is this relative importance determined by the particular



needs, or stage of knowledge, of the current generation, but a change of general theory may create as much disturbance amongst their relative ranks as one of dynasty would in an Oriental monarchy. If I mistake not, the present disposition of advanced biologists is to regard structure as of much more importance in classification than function; the purposes, that is, to which different organs may be put are widely modifiable by external circumstances. If therefore we look merely to the magnitude of the differences between individuals we should make one arrangement; but if we seek to trace out actual relationship we shall make a very different one, by attaching the importance to underlying structural affinities which would otherwise be very indifferent, and neglecting those which may be very striking. If Evolution in its present form be a final theory, then no doubt we may have got at something like an 'objective' connotation of some of our class-terms, but only on this rather bold assumption.

The foregoing considerations might be pursued in detail in many other directions, but what has already been said may suffice to illustrate the general proposition with which I started, *viz.*, that we cannot regard an entirely objective treatment of Logic as anything but an ideal from which we are at present indefinitely remote. In speculation, no doubt, we can make a clean split between the objective and the subjective, and set them apart over against one another. But if we look to the practical necessities of life and the actual processes of thought, we shall find that it is in the intermediate layer of tissue, if one may so say, that all the vital processes of growth and organisation are going on. Instead of regarding Logic as a purely objective science, we might with more propriety term it a science which gives the rules for converting the subjective into the objective.

I cordially agree with Mr. Spencer in the propriety of the logician keeping before him the congeries of objective existences as the goal to which he is to strive, and the standard by which he is to test every rule, and to this extent causing his science to be classed amongst those which are objective. But if we attempt to do more than this, by insisting upon confining Logic to what can be regarded as strictly objective at present, we should find ourselves greatly straitened. We should in fact stand in need of a third science, midway between the two called Logic and the Theory of Reasoning, and to this third we should have to relegate far the greater part of all that now currently goes by the name of Logic. This would, of course, be an absurd subdivision, and therefore it seems better not to claim an objectivity unattainable at present, but to admit frankly that



our processes and results in Logic are conditioned on every side by subjective or relative considerations. Our logical machinery and technical phraseology can only be interpreted by the help of numerous assumptions or conventions; relative, not merely to human intelligence in general but, more narrowly, to the amount and distribution of the knowledge of the persons who have to use the Logic.

J. VENN.

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#### IV.—MARCUS AURELIUS AND THE STOIC PHILOSOPHY.

It costs us some effort to realise the full importance of philosophy to the Greek or Roman citizen who had received a liberal education. For him it combined in one whole body of doctrine all the authority and influence which nowadays are divided, not without contention, by science, philosophy, and religion in varying shares. It was not an intellectual exercise or a special study, but a serious endeavour to gather up the results of all human knowledge in their most general form, and make them available for the practical conduct of life. We know that Greek philosophy had its full share in the bloodless victories won by Greece over her conquerors; and that the Stoic system was especially congenial to the Roman character, and had a considerable majority of adherents among cultivated Romans. We know that the lives of illustrious rulers and statesmen, and of him not least among them of whom there is presently more to be said, were formed upon the discipline of that system; and if evidence is ever to be trusted to connect men's actions and character with their professed beliefs, we have abundant and trustworthy evidence in this case. These facts are almost too commonplace for express mention; but it is perhaps not so easy to remember, what nevertheless is undeniable, that for every name which has made Stoicism remarkable in history, there must have been many, now scarcely noted or wholly forgotten, among the men who did the abiding work of the Roman empire in provinces where the follies and revolutions of the palace had little effect. I have called their work abiding, for it is to be remembered that Rome not only kept peace and order throughout an immense dominion inhabited by all races and conditions of men, and governed some parts of the world infinitely better than they have been governed before or since, but set a stamp on the whole frame of the civilised world which in many respects remains to this day. The Stoic philosophy was in no

small measure the source of the moral influences under which this work was done. Moreover, its hand can be distinctly traced in the development of legal conceptions and of the law itself.

It is therefore a matter of considerable interest to understand how Stoicism presented itself to the men in whose hands its teaching bore such fruit ; nor is this altogether so easy as might be supposed, for it is one thing to have the tenets of a system laid down in works of professed exposition or discussion, and another thing to seize those elements which really commend the system to those who adopt it in practice. In the case of Stoicism we have abundant accounts of its theory, but for the most part at second-hand. Nothing has come to us straight from the founders or leaders of the original Greek school. In the latter time Seneca can hardly be counted for more than a retailer. Of Epictetus we have only notes and reminiscences put into shape after his death ; and Epictetus, after all, is an official preacher. And this increases the difficulty of rightly apprehending the real working contents of the Stoic philosophy. But the difficulty is happily much lessened by our possession of an almost unique piece of evidence—the note-book of an emperor who was likewise a philosopher, or at least a very apt learner in philosophy. The *Commentaries* of M. Aurelius Antoninus, as the editions call them for the want of a better name, have all the appearance of notes freely set down for the writer's own use, and without any thought of publication. They are constantly abrupt, unfinished, or hardly grammatical ; some passages are evidently mere jottings of topics for further writing or reflection, the exact meaning of which can be only guessed at. How or when they were first made public is not known. We have here, then, the substance of the Stoic philosophy considered as a working rule of life, and so considered by a disciple whose opportunities of testing it could not well be surpassed. For although it is commonly taken for granted that men's moral principles are best judged in adversity, one may well doubt whether a position of great eminence and weighty duties does not put them to a more perfect trial.

In Marcus Aurelius, then, it seems to me that we may find the safest guide to the knowledge of the Stoic morality in its practical aspect and in its relation to the general system of which it was part. The intrinsic beauty of the morality set forth by him, both in substance and in temper, has been constantly admired ; but we are apt to forget that Marcus Aurelius was not a solitary apparition of virtue, but the disciple and representative—an illustrious one, no doubt—of a settled and widely-spread doctrine. And this doctrine, notwithstanding its singularities, or sometimes by reason of them, comes nearer to

our own ways of thinking, and has more lessons for us, than appears at first sight.

Before we examine any specific points of the Stoic philosophy, it may be as well to pause and see what were its aims. It is in some sense true that all philosophers are in search of the same end; yet it is in practice very difficult for a philosopher even to announce his object without showing what method he intends to follow and what sort of results he expects to get. Now the objects of the Stoics were eminently practical; they strongly held that knowledge is for the sake of action, and that the worth of philosophy consists in its power to guide the conduct of life. Among other illustrations and comparisons which seem not very pointed to a modern taste they likened philosophy to a fertile field, logic to the fence round it, and ethics to the crop grown in it. They further said that the knowledge by which action is to be guided is a knowledge derived from experience; and they said it in terms which fixed no bounds to the possible bearing of experience and knowledge upon action. Chrysippus, who was considered to have settled the Stoic system in its finished form, is reported to have stated his ideal of life to this effect:—"A virtuous life is the same thing as a life agreeable to experience of what happens in the course of nature; for the nature of each of us men is part of the nature of the world."<sup>1</sup> How the Stoics conceived of *experience* we learn from Plutarch; experience, they said, is by the multitude of similar (or uniform) perceptions.<sup>2</sup> Thus the knowledge that is to serve us in life is founded on an observed order of things, which order is thought of as something belonging to the whole world, and equally present in every part of it. Now this is exactly such a general conception of knowledge as in these times is growing upon us as we become more familiar with the methods and results of science. And we have here no mere verbal coincidence gathered from scattered sentences; the testimony of M. Aurelius will show that the parallel is a real one. The conception of the world as orderly does not only lie at the root of the Stoic system, and explain, as will presently be seen, many of the things that appear strangest in it; we find it constantly treated as something to be kept actively present in the mind, and capable of affording present support and guidance. This it does in two ways: the first bearing immediately upon action, the other more remotely, but not less steadily, through contemplation. First, a

<sup>1</sup> Ritter and Preller, *Hist. Græc. et Rom. Phil.*, p. 363, 3rd ed. We are expressly told that with Chrysippus the commoner Stoic form of speech—"a life according to nature"—was synonymous with this (*Ib.* 388).

<sup>2</sup> Ἐμπειρία γὰρ ἐστὶ τὸ τῶν ὁμοειδῶν φαντασιῶν πλῆθος (*Ib.* 368).

right understanding of the external order of things (*ἡ τοῦ ὅλου φύσις*) is in a manner needful for right conduct. It points out to us not indeed duty itself, but the conditions of our duties. It cannot tell us what our actual duties are; that depends on the specific character of man as distinct from other creatures, and more especially upon his social nature. But it can guide us in judging the circumstances and consequences of which we must be in possession in any particular case before we can tell what is really the question of conduct that arises; it does not solve moral problems, but enables us to know what we are about in settling their data. "See whither nature leads you, the universal nature by means of that which happens to you, your own by means of that which you have to do."<sup>1</sup> Obstacles and difficulties present themselves to man's intentions; but he has reason given him that he may find out what is the best thing practicable, and do that; nay, reason has the power to compel the stubborn things of the world to her own ends, as fire converts all sorts of fuel to itself. A right purpose guided by right understanding cannot be really disappointed.<sup>2</sup> But this is hardly so important as the more contemplative aspect of the universal order, which is dwelt upon by Marcus Aurelius with striking force and frequency. The mind that learns to recognise a fixed order and connexion in the changing appearances of the world also learns to take a certain intellectual pleasure in that order considered in itself, apart from the pleasurable or useful character of its operations in their particular effects. Everything has a fitness in its own place, and almost everything may thus be a source of contemplative pleasure to him "who has become truly familiar with nature and her works".<sup>3</sup>

Again, all things are ever changing and passing away; one comes in another's place and no single thing endures. Perpetual change and renewal is the first law of nature, and everything is in a manner but the seed of that which shall be made of it;<sup>4</sup> existence is a river in constant flow, a torrent sweeping everything before it; the operations of all forces consist in manifold

<sup>1</sup> Marcus Aurelius, VII. 55. References hereafter given without an author's name are to the book and section of his work.

<sup>2</sup> IV. 1; VII. 68; VIII. 32, 35; X. 31, 33. In an extreme case the general Stoic doctrine allowed the final way of escape (*ἐξαιρωγή*) by suicide. But M. Aurelius, though he nowhere controverts this, seems to hold that there is no case in which there is not something satisfactory to be done.

<sup>3</sup> III. 2; a remarkable passage, which seems to place the contentment of the scientific mind on grounds independent of the ordinary Stoic teleology.

<sup>4</sup> IV. 36; comp. VIII. 6.

and unceasing change,<sup>1</sup> and this change is indeed the very condition of the being and perfection of all finite creatures.<sup>2</sup> Every part of the world is mutable and subject to decay; but these things are so in order that the world, thus made up of ever perishing parts, may itself be ever the same and ever young.<sup>3</sup> But man is himself part of the universal scheme, and his specific character as man, although it is distinct and important (and by no one has its distinctness and importance been more dwelt upon than by the Stoics), is in the last resort determined by the conditions of the universal order. We may therefore think of ourselves as belonging to the whole order of the world and bring ourselves into a certain sympathy with it. And this habit of thought will help us to lift ourselves above the common passions that vex us with surprise and discontent when events fall out so as to cross our individual desires. Nothing can befall us that is not in the nature of things capable of being understood and reckoned with, and it is our business to master circumstances by understanding them.<sup>4</sup> As for those things which it is not in the power of man to alter or avoid, we are to accept them as being part of that order in which we ourselves are a part, and in which all things, however wide asunder in seeming, are in truth conjoined, and work together for the whole.<sup>5</sup> "Consider the courses of the stars as one running the same course with them, and think constantly upon the changes of the elements into one another; for by the perception of these things the grossness of our life on earth is purged away:" "nothing is so fitted as this to beget highmindedness."<sup>6</sup> Thus we are led to one of the features which is most prominently put forward by the Stoics, at any rate by Marcus Aurelius, in setting forth the ethical ideal. Not only does the fruit of skill and understanding belong to the mind that knows the beginning and end of things, and the reason that pervades and rules all existence;<sup>7</sup> not only does the wise man acquiesce in the decrees of the universal order, knowing that they cannot be otherwise; he meets events with a contented and cheerful assurance, and his maxim is "to welcome everything that happens."<sup>8</sup> Whatever comes to us, however hard it may seem,

<sup>1</sup> V. 23; IX. 29; *χειμάρρουν ἢ τῶν ὅλων οὐσία: πάντα φέρει.*

<sup>2</sup> VII. 18.

<sup>3</sup> VII. 25; XII. 23. Cp. Spinoza's "*facies totius universi, quae quamvis infinitis modis variet, manet tamen semper eadem*" (*Ep. 66, ad fin.*).

<sup>4</sup> VII. 47, 68; VIII. 15; comp. XII. 10, 18.

<sup>5</sup> IV. 40; VI. 36, 38; VII. 9. <sup>6</sup> VII. 47; X. 11. <sup>7</sup> V. 32.

<sup>8</sup> *ἀσπάρεσθαι τὰ συμβαίνοντα* or *πάν τὸ συμβαῖνον*, III. 16; IV. 33; and many other places.

is *prescribed* by nature, and is no less for the health of the whole than the remedies prescribed by a physician are for the health of the patient. If we repine at anything that happens in the course of nature, we are striving, so far as in us lies, to maim the perfection and unity of the world.<sup>1</sup> So that the rightly instructed man will say to Nature, the giver and taker of all things: "Give what thou wilt: take what thou wilt."<sup>2</sup> Epictetus bade his hearers never to say that they had *lost* anything, but that they had *returned* it.<sup>3</sup> And Marcus Aurelius, going far beyond simple resignation or acquiescence, lifts up his voice in a hymn of adoration (for one can hardly call it otherwise) which is among the most remarkable utterances of ancient philosophy.

"Everything harmonises with me which is harmonious to thee, O Universe. Nothing for me is too early or too late which is in due time for thee. Everything is fruit to me which thy seasons bring, O Nature; from thee are all things, in thee are all things, to thee all things return. The poet says, Dear city of Cecrops; and wilt not thou say, Dear city of Zeus?"<sup>4</sup>

The last words bring out the speculative foundation of that cosmopolitan character which has always been remarked as prominent in the Stoic system. The Stoics shared, however, with other post-Aristotelian schools a strong cosmopolitan tendency, which is accounted for by the social and political circumstances of the time, and in particular by the decay of local independence, and therewith of the old Greek patriotism, coinciding with a great enlargement of commerce and intercourse between different parts of the world.

It is not my purpose to enter on the task of comparing Stoicism with modern philosophies. But one cannot help being struck by the resemblance of the line of speculation which I have just endeavoured to trace in M. Aurelius, and which seems to me to have been a very central one with the Stoics, to that which is struck out by Strauss in his latest work. English readers may find an even closer parallel to the Stoic nature-worship in a place where few, perhaps, would think of looking for it; I mean in Mr. Swinburne's *Songs before Sunrise*.

It will be observed that the mood of reverent acquiescence, or something more, with which a Stoic looked upon the order of the universe includes elements which do not seem to belong to a purely scientific contemplation. As yet we have not taken account of these, although the foregoing statement could not be kept clear of them. The Stoics had, indeed, the conception of natural order as a thing ascertained by experience, and worth

<sup>1</sup> V. 8.<sup>2</sup> X. 14.<sup>3</sup> Epict., *Ench.* 11.<sup>4</sup> IV. 23 (Mr. Long's translation).

knowing and making the best of simply because it is there and cannot be otherwise. But they sought to reinforce this idea by a creed of dogmatic pantheism with which their doctrine of the Kosmos was closely knit. And this pantheism was associated with, and to a large extent rested upon, a no less dogmatic teleology. Some, at least, of the Stoic leaders appear to have pushed their reflections on final causes into details which nowadays must appear ludicrous to every one. I do not mean that these dogmas were adopted of set purpose; existing habits of thought and language must have suggested them with almost irresistible force. "Qui dit loi dit ordre; qui dit ordre dit finalité: tous ces termes s'impliquent logiquement," says a writer of our own day.<sup>1</sup> To a Greek all this was implied in the one word Kosmos, as M. Aurelius does not fail to note. The Stoics asserted that the world is a product of reason, and that all the laws of nature aim in the long run at reasonable ends. That which partakes less of reason exists for the sake of that which has a greater share of it; so that, without saying exactly that the world was made for man, a Stoic might easily take an anthropomorphic, or rather anthropocentric view of it. Again, the earlier Stoics were not content with the uniformity of nature as an observed similarity of results in similar conditions, but by a strangely fantastic addition they imagined the conditions themselves as recurring on a vast scale. They held, in common with the Pythagoreans, that the world is periodically destroyed and regenerated. Internal evidence and tradition both tend to show that the Pythagoreans got this doctrine, together with that of the transmigration of souls, from India. It is true that the details of the Pythagorean teaching are not sufficiently known. But both doctrines are set forth at some length in mythical fashion by Plato; the recurring cycles of the world's life in the *Politicus*, the transmigration of souls in the *Phædrus*. And in both places, especially the latter, the points of likeness to Indian belief are almost too many to be accounted for by coincidence. Probably both Plato and the Stoics borrowed from the Pythagoreans, though M. Aurelius exhibits one curious coincidence in detail with the language of Hindu philosophy which suggests at least a possibility of later independent communications with the East.<sup>2</sup> Be this as it may,

<sup>1</sup> M. E. Vacherot, in *Revue des deux Mondes*, Aug. 1, 1876, p. 503.

<sup>2</sup> "One is the sun's light, though dispersed by walls, mountains, and other things without number. One is the substance of all things, though dispersed in bodies without number, each of a determinate species [the term in the original, *ἰδίως ποίον*, is a technical one]. One is reasonable mind (*νοερά ψυχή*), though it seem to be divided," XII. 30. The simile of the sun is a commonplace of Indian philosophic poetry, and may have



the Pythagoreans, followed by the Stoics, proceeded to better their instructors (whom they had perhaps misunderstood) by asserting that not only was the world to be destroyed and renewed when the perfect period of all things, or *annus magnus*, should be fulfilled, but that the former conditions were to be exactly reproduced, and the whole course of events repeat itself in the minutest details. (This is not only foreign to the Brahman cosmogony, but inconsistent with it.) The only modern parallel I can now call to mind is in a book of no special philosophical pretensions, entitled *Peter Simple*, where Mr. Muddle, the carpenter, assures the captain, with unconscious Stoicism, that he found the very same fault with him on that same quarter-deck 27,672 years ago. Among the later Stoics, Panætius and some others rejected this absurdity; but there is nothing to warrant the belief, which one would be glad to entertain if one could, that Marcus Aurelius did so. He alludes to the doctrine several times without dissent, and with only such slight indications of doubt as to leave it possible that he may have thought the question an open one, but of no practical importance.<sup>1</sup>

Again, there is another quite distinct kind of reflection which is apt to be mixed up with the scientific notion of uniformity, and may even simulate it in expression. Moralists of almost every age and school have dwelt upon the common and monotonous character of human life as a reason for not setting one's heart on the usual objects of desire. "There is nothing new under the sun." This commonplace is certainly to be found in M. Aurelius,<sup>2</sup> and when he says that he who has seen the present has also seen the boundless past and future,<sup>3</sup> and speaks elsewhere to the like effect, he may mean only to repeat the same thing; and very possibly the official teaching of Stoicism put it forward as a deduction from the idle fancy just noticed. Still one is tempted to think he had in his mind the greater conception of an order without assignable bounds in time or space, so complete and unbroken that from a perfect know-

become known to the Greeks. But the Stoic pantheism has in the main very little in common with that of the Hindus.

<sup>1</sup> V. 13, 32; VII. 19; IX. 28; X. 7; XI. 1; in VII. 19, *πόσους ἤδη ὁ αἰὼν Χρυσίππου, πόσους Ἐπικτήτου κυριόπεπωκε*; may only mean, as far as the words go, "How many such as Chrysippus and Epictetus have lived and died". So M. Barthélemy St. Hilaire takes it. But it is too like the phrase, doubtless a regular one in the schools, in which the current figment has been preserved to us: *εἶσεσθαι πάλιν Σωκράτην καὶ Πλάτωνα καὶ ἕκαστον τῶν ἀνθρώπων κ. τ. λ.* Nemesius ap. Ritt. and Pr. 381. On the whole matter see Zeller's note, *Phil. der Griechen*, III., pt. i., 141.

For example, IX. 14.

<sup>2</sup> VI. 37.

ledge of the condition of the whole system at any given moment there might be deduced an accurate account of its condition at any time before or after. Certainly in another passage he seems to imagine a "reign of law," as we now say, both in the co-existence and in the succession of things. There is a rational connexion, he says, in the sequence of events; it is not like a mere enumeration of particulars in an arbitrary order.<sup>1</sup> M. Aurelius appears to affirm, again, that either there is no reason at all in the world (and for him, as a Stoic, reason and order are synonymous), or everything that happens must be the determinate result of an original and universal order: but the passage is far from clear.<sup>2</sup> It is worth noting that his conception of uniformity, whatever it was, applied no less to human affairs and conduct than to any other class of events.<sup>3</sup> This is no more than one would expect, as the Stoic philosophy is well known from other sources to have been wholly determinist.<sup>4</sup> The technical name for the necessity or universal law governing the world was *εἰσπράξις*. "Fatum autem id appello," says Cicero, abridging or paraphrasing, as it seems, from the Stoic Posidonius, "quod Graeci *εἰσπράξις*, id est ordinem seriemque causarum cum causa causae nexa rem ex se signat. Ea est ex omni aeternitate fluens veritas sempiterna. Quod cum ita sit, nihil est factum, quod non futurum fuerit, eodemque modo nihil est futurum, cuius non causas id ipsum efficientes natura contineat."<sup>5</sup>

It is remarkable that this general tone of cosmical and scientific contemplation did not bring the Stoics into conflict with the popular creed. Not only did they offer no opposition to the rites, observances, and superstitions of the unlearned, but they even found reasons in their philosophy to support them. Especially they defended the art and mystery of divination long after it had become the subject of doubt or open disbelief elsewhere; and they attempted to give their defence the appearance of a serious argument on scientific grounds. Their system forbade them to affirm special interferences with the course of nature, such as signs and wonders were commonly esteemed. The events foretold by omens and victims were indeed, they said, unchangeable and determined from the first, as links in the chain of an eternal order. But the omens and victims were

<sup>1</sup> IV. 45. Mr. Long gives "a necessary sequence" for τὸ καθ' ὑποκρίσιν. But in modern usage that is necessary which is the result of law; whereas the ἀνάγκη here contemplated is the opposite of law.

<sup>2</sup> VII. 75; see Mr. Long's note.

<sup>3</sup> VII. 49.

<sup>4</sup> See Zeller, *Phil. de Griechen*, III. pt. 1, 144-155.

<sup>5</sup> *De Div.*, I. 125.

also links in the same order.<sup>1</sup> The fact of the connexion was abundantly established by experience; and as for the part of the gods in the matter, they did not change the order of things, but knew the hidden causes and signs of events better than men, possessing as they did a higher intelligence; and what could be more natural and reasonable than that they should be moved by goodwill to man to impart some of their knowledge to him? Arguments were constructed exhibiting the truth of divination as a necessary deduction from the existence of gods:<sup>2</sup> and the prophecies of the soothsayer were represented as analogous to the scientific predictions of the astronomer. The Stoics would not have found much to learn, apparently, from the defenders of sundry pseudo-scientific positions in later days. On this point Panætius again stands out in honourable dissent; he ventured (to the no small scandal of his colleagues) to cast doubt on the efficacy of divination.<sup>3</sup>

We have yet to remark the greatest speculative paradox of the Stoic philosophy. It exalted Reason as the source of the world's order, the one ruler and judge of all things, the sole fountain of good to every creature, and especially the sole origin and measure of morality for man. And at the same time it was frankly, nay grossly materialist; no whit less so than the rival school of Epicurus, and probably more so than any modern school has been. The Stoics asserted in set terms that nothing really exists but matter, and that the soul is material (*σῶμα ἢ ψυχή*).<sup>4</sup> Even the world-soul, which they identified with Zeus or the supreme God, was regarded as a kind of finer matter endowed with special qualities of penetration and diffusion—the elemental fire as they sometimes called it. They would have hailed the luminiferous ether as an even more valuable contribution to theology than to physics. To give one concrete example of this materialism, Marcus Aurelius gravely notes and considers the question (not unlikely to have been a current one) how there can be room in the air for all the souls of the dead?<sup>5</sup> I am not aware that either the materialism or the superstition of the Stoics had any sensible effect on their ethical doctrines or practice; but it was impossible to omit mention of these things, as the omission might have been misleading. It is likewise hardly possible to forbear noticing the signal example

<sup>1</sup> Cicero, *op. cit.*, I. 118.

<sup>2</sup> Cic., *op. cit.*, I. 82, II. 101.

<sup>3</sup> Cic., *op. cit.* I. 6. On the subject generally, Zeller, *Phil. der Gr.*, III. pt. i., 313, *seqq.*

<sup>4</sup> They described the intelligible or predicable relation (*λεκτὸν, κατηγορημα*) between material things as immaterial (*ἀσώματον*).

<sup>5</sup> IV. 21.

here given of the danger there is in affecting to hold either schools or particular men to what are called the logical consequences of their opinions. We hear a good deal nowadays of the mischievous tendencies of materialism and pantheism, and their incompatibility with a high moral ideal; and this not only from those who scatter materialism and pantheism as vague terms of abuse, but from men who have a distinct meaning for their words. In the philosophy of the Porch we find that, as a matter of fact, a most lofty and ideal morality—which indeed so much abhorred all weakness, compromise, and condescension, that it has earned even with a wise and generous historian the reputation of being harsh and impracticable—was associated with both pantheism and materialism in their crudest forms. We also hear a good deal of the absolute necessity of the doctrine of free-will (that is, causeless volitions) for the support and the very existence of morality: those who use such language surely forget that Marcus Aurelius, in common with all the moralists of his school, was an uncompromising determinist. It would seem that on the whole it is more or less unsafe to rely on any supposed necessary connexion between metaphysics and morals.

It is true that the Stoics conceived matter itself, or at least that which composed the finer elements, to be in its own nature active, so that their physics, as Zeller puts it, were dynamical rather than mechanical. And it may also be said that the contrast between materialism and idealism had not then been sharply defined as it is now. They may be said therefore, in a certain sense, not to have been pure materialists.<sup>1</sup> But the same may be said, for the same or other reasons, of most of the writers to whom the name is applied in modern times.

The ethical theory of the Stoics can be understood only by keeping in mind its connexion with the general view of the world of which we have endeavoured to give some sketch. Taken by itself, the language of their fundamental maxims is exceedingly vague; and some well-known expositions of them, which are classical as literature but of secondary rank in philosophy, may be vague enough to justify the surprise and even contempt expressed by some modern writers. "Live according to Nature" is at first sight the most ambiguous of precepts. But the Stoics had a definite meaning for it, and were at some pains to explain it. They held, as we have seen, that everything is subject to one universal order, which is itself settled by, or rather is conceived as being, a supreme and all-pervading intelligence. This order being determinate and irresistible,

<sup>1</sup> Lange, *Gesch. des Materialismus*, I. 72, 2nd ed.

every agent and event in some way or other fulfils it. Even those who think to hinder it are against their own conceit working for it, and we may say of them "Of these too the world had need".<sup>1</sup> On this ground there is obviously no foundation for ethical distinctions. But when we so far quit this universal point of view as to consider any particular species in relation to the whole, we see that it has certain constant relations to the rest of the world, which in fact determine its specific character, and which in the case of living creatures the life of the species is occupied in maintaining. Every creature has some normal function as part of the general order of the Kosmos;<sup>2</sup> what those functions are for each kind is to be ascertained by experience. They must always include, however, the preservation of the species; otherwise it could not exist as a species: thus the impulse of self-preservation, which the Stoics ascribed to every creature as the first spring of action, is not only common, as a matter of fact, to all active beings, but is an integral part of the common order of the world. Every act of an individual which belongs to the proper function of its species as thus understood is, in the Stoic language, *according to Nature* as regards that species, that is, according to its specific nature (*ἰδία φύσις*); and inasmuch as it is an instance of the general law which fixes the normal place and action of the species in the great concert of the Kosmos, it is also said to be in an eminent manner *according to Nature*, taken in the general sense as the universal order (*κοινὴ φύσις*). Now man, as well as other creatures, has his specific function, or *nature* in the Stoic sense, as part of the cosmical plan. But, unlike other creatures, he can fulfil it with conscious intelligence and choice. He may know his station in the world, and know also that in maintaining it he is fulfilling the purpose of the supreme Reason. By the very fact of being addressed to an understanding agent the command "Live according to Nature" becomes "Live according to Reason." This reason, as expressed in the constitution of man and his relations to the world, his capacities, his achievements, and his aspirations, furnishes a type or pattern of life which may be sufficiently known by those who choose to model their conduct upon it. Actions conformable to this type are morally right, and rightmindedness is the conscious striving to attain it (we neglect for the moment the minuter points of Stoic doctrine); it is in this sense that moral goodness is the fulfilment of man's proper nature. The architect or the physician has his proper art, which, if he is competent in it, he conducts according to fixed principles; but every man, simply

<sup>1</sup> VI. 42.<sup>2</sup> ἔκαστον πρὸς τὴν γέγονεν, VIII. 19.

as a man, is in the same case;<sup>1</sup> and man, like every other creature, is judged by his fitness for the work for which he is destined.<sup>2</sup> "What is your business in the world? To be good."<sup>3</sup> This then is the calling imposed upon man by the supreme Reason; a fact to be observed which implies a law to be obeyed. Righteousness consists in fulfilling the duties imposed by it with a cheerful obedience of discipline.<sup>4</sup>

Some points must be noted here in which the Stoics differed much from the moralists of later times, not so much in their solution of ethical problems as in their conception of the problems themselves and of the province of ethics as a science. A modern reader is tempted to ask where is the *sanction* in the Stoic scheme of morality? How does it answer the question which some regard as the very first that moral philosophy is bound to answer—why should I do right? It may seem strange to us, but so it is, that the Greek philosophers, and especially the Stoics, troubled themselves very little to find a direct reply. The question seems hardly to have occurred to them in that form; they rather assumed that a doctrine of ethics is addressed to learners who are in the main willing to be taught, and it is far from certain that they were wrong in so doing. It may be fairly doubted whether it is the business of moral philosophy to establish the existence of its own subject-matter. There is no topic on which one may not bring argument to a standstill by pushing obstinate denial far enough; and it may be that a man who will not admit that there is such a thing as moral duty thereby removes himself out of the reach of philosophy, and is amenable (supposing his opinion to be sincerely held and acted upon) only to other kinds of discipline. After all, the modern way of supporting the moral law with sanctions only puts the difficulty back; for what if a perverse man should say, I do not care for your sanction? We know that the most stringent sanctions have in fact been deliberately set at defiance on several occasions. Do we say, then, that sanctions are of no account? Certainly not; their part in a historical inquiry concerning the growth of morality, or in the consideration of the state of morals existing at any given time and place, is of the utmost importance; but this belongs to the practical side of the matter, and does not show that duty can be exhibited by way of logical demonstration to any recalcitrant individual. But to return to the Stoics: whether it was a real

<sup>1</sup> VI. 35.

<sup>2</sup> VI. 16.

<sup>3</sup> XI. 5.

<sup>4</sup> The disobedient and dissatisfied are compared to runaway slaves, X. 25, and more oddly to a pig that kicks and squeaks when it is sacrificed, X. 28. Modern readers may be inclined to agree with the pig.

omission or not, they did not consider the groundwork of ethics in this light. In Marcus Aurelius there is very little about the consequences of right or wrong actions to the individual agent. It is worth mentioning, however, that in one passage of Epictetus we find a clear enough expression of what is now called the sanction of self-esteem.<sup>1</sup> He distinctly says that we are to weigh against the enjoyment of a present pleasure, on the one hand the future pain of repentance and self-reproach, on the other hand the future pleasure of a satisfied conscience. And the Stoics asserted no less stoutly than any one else, even the Epicureans, that virtue is the only true happiness, though they denied that virtue is morally preferable *because* it gives happiness. Even this, however, is not prominent in Marcus Aurelius; and it is needless to repeat here that the Stoics required virtue to be above all things disinterested. One instance may be given: "When thou hast done a good act and another has received it, why dost thou still look for a third thing besides these, as fools do, either to have the reputation of having done a good act or to obtain a return."<sup>2</sup> Of the optimism of their ethics we must say a word more presently.

Now this assumption, which I think is tacitly made all through the Stoic teaching—namely, that there is such a thing as a rule of right conduct binding one man as well as another, and that the average man, so far at any rate as philosophy has to deal with him, is willing to follow that rule if it is properly explained to him—brings us almost at once to the famous Socratic position, that *virtue can be taught*; or obversely, that vice is mere ignorance. If (among the nations which have produced philosophers at all events) men were not on the whole able and willing to do right oftener than not, it is difficult to see how moral philosophy would be possible. In so far as a man is able and willing to do right, he can do wrong only by mistake or misapprehension; and it is readily perceived that much wrong has been and is done in the world for pure want of knowledge. The Stoics, dwelling exclusively upon this view, referred all wrong-doing to this head; and the doctrine had great practical importance in their school, as we see in Marcus Aurelius, as an argument for patience and equanimity in bearing misbehaviour at the hands of one's fellow-men. Reflect, he says in substance, that it is the deed of your fellow and kinsman, not knowing the law of his own nature;<sup>3</sup> ask yourself what is his mistake;<sup>4</sup> his wrong is in truth involuntary;<sup>5</sup> it is

<sup>1</sup> Epict. *Ench.* 34.

<sup>2</sup> VII. 73 (Mr. Long's translation); and see IX. 42, cited below.

<sup>3</sup> III. 11.      <sup>4</sup> V. 22; VII. 26.      <sup>5</sup> VII. 22, 63; X. 30; XII. 12.



the inevitable result of his erroneous notions as to what is good and desirable,<sup>1</sup> his mind being as it were jaundiced.<sup>2</sup> It is more than once added that rather than waste time in anger, you should teach him to know better.<sup>3</sup> Other reasons are also given in the same and other passages, but none so characteristic of the Stoic system. Once it is said, "It is proper to man to love even offenders."<sup>4</sup> Again, the immortal gods have to put up with worthless men through all time, and take it not amiss; how much more then shall you endure them for a little lifetime, being even such an one yourself?<sup>5</sup>

From this digression, which seemed needful by way of explanation, we go back to the positive conception of morality as held by the Stoics. Virtue does not, in their view, consist in action directed consciously to the attainment of some ulterior advantage, but in the normal and healthy exercise of an active function<sup>6</sup> belonging to the proper constitution of man as a species (*ἰδία φύσις*). The question then presents itself, what is this specific constitution? What are the characteristic qualities of man that make him a moral being? The answer, often and in many forms reiterated in the teaching and writing of the school, is that man is reasonable and social; there is no lack of other authorities on this point, but the constant occurrence of the topic in Marcus Aurelius is significant as confirming them. Here again it is to be observed how the Stoics made use of their cosmical and teleological ideas as a background for ethical theory. The world itself being conceived as rational, and man being the eminently rational creature, the agreement of man's *ἰδία φύσις* with the *κοινὴ φύσις*, or general law of the universe, is presented with an air of self-evidence.<sup>7</sup> It is likewise assumed as axiomatic (so at least it appears in Marcus Aurelius) that the only rational life for man is a social life. When man consults his reason it clearly and imperatively bids him live with his fellow-men; human reason itself is constantly called social (*λόγος κοινωνικός*, sometimes *πολιτικός*). "He is a deserter who abandons the social reason. . . . he is a fragment torn from society who tears his own soul from the

<sup>1</sup> VIII. 14.

<sup>2</sup> VI. 57.

<sup>3</sup> X. 4; XI. 11; XI. 18 (in this last passage most of the precepts for such occasions are summed up).

<sup>4</sup> VII. 22.

<sup>5</sup> VII. 70; compare with this the legend of Abraham and the fire-worshipper.

<sup>6</sup> The man of sound judgment perceives that his own good lies in his own activity (*ἰδίαν πράξιν*), VI. 51.

<sup>7</sup> For the reasonable animal (man) action "according to nature" and "according to reason" are identical, VII. 11.

soul of reasonable creatures, which is one."<sup>1</sup> As will be seen by this last quotation, the pantheism of which we have already spoken is brought in to give a metaphysical reason for the social bond; the souls of men being conceived as pieces or quantities of the same stuff. Man is social, and is entitled to sociable treatment at the hands of his fellow-man because he is reasonable.<sup>2</sup> Each man is to the community as a member to an organism, not as a mere part to an aggregate;<sup>3</sup> so the man who commits an unsocial action is a mutilator of the body politic, in that he cuts himself off from it; but, as Marcus Aurelius or his original quaintly, yet finely, adds, the limbs of this body have the special gift of being able to reunite themselves to it.<sup>4</sup> Further, as a branch cut off from the next branch must needs be cut off from the whole tree, so a man at strife with his neighbour is cut off from the whole fellowship of men.<sup>5</sup> The whole of man's action is to be directed to social ends, and to the good of his fellow-men,<sup>6</sup> and such action, being the exercise of man's proper energy and the fulfilment of his truest nature, is its own sole and sufficient reward. Does the eye seek a recompense for seeing or the feet for walking? Likewise the man who has done aught towards the common weal has done that which he is set in the world to do, and in doing it receives his own.<sup>7</sup> It is even said that every deed that does not bear directly or remotely on the chief end of the common welfare is of the nature of dissension and sedition.<sup>8</sup> One passage, in which the duty of sociableness is enforced, first by various supposed physical analogies in the elements, and then by the example of the gregarious and social animals, concludes with the remark that no man can be wholly unsocial even if he tries: nature is too strong.<sup>9</sup> It is said, too, that the ruling principle in man's constitution is that of society.<sup>10</sup> In all this there is at the same time a notable absence of any distinct reference to political activities and duties; the city from which all the older Greek ideas of religion and morality took their spring and strength has become expanded to the bounds of the inhabited world, and man owes duties to his neighbour, not as his fellow-citizen, but as his fellow-man. For the *πολιτικὸν ζῶον* of Aristotle the teachers of Marcus Aurelius had substituted *κοινωνικόν*. This is indeed one of the most familiar marks of the post-Aristotelian philosophy in general. In some ways the cosmopolitan turn of ethical conceptions was a real advance,

<sup>1</sup> IV. 29.<sup>2</sup> VI. 23.<sup>3</sup> VII. 13. There is an untranslatable pun on *μέλος* and *μέρος*.<sup>4</sup> VIII. 34; XI. 8.<sup>5</sup> XI. 8.<sup>6</sup> VII. 5; IX. 23.<sup>7</sup> IX. 42.<sup>8</sup> IX. 23.<sup>9</sup> IX. 9.<sup>10</sup> VII. 55.

though both its origin and its development exhibit clear signs of weakness. But in considering the effect of Stoicism on the Roman world it is proper to bear in mind that the feeble side of its cosmopolitan doctrine was just that to which a Roman disciple accustomed to take part in affairs of state would be likely to bring sufficient correction from his own resources. A Roman commander or administrator guarding the frontiers of the Empire against fierce and barbarous tribes could never be a mere citizen of the world; and it is not insignificant that we find Marcus Aurelius, who was himself thus engaged during part of the time that he set down his notes, more than once giving a marked place in his reflections to his duties as the first of Roman citizens. "Being Antoninus, I have Rome to my city and country; being a man, the world. The weal, then, of these cities is the sole measure of good for me."<sup>1</sup> Before passing on we may note that the connexion between the social morality of Stoicism and its cosmical theory is well given in a single sentence by Cicero: "They (the Stoics) are of opinion that the world is governed by the power of the gods, and is in a manner a common city and polity of men and gods; of which world each one of us is a member. Whence this follows in course of nature, that we set the common weal before our own."<sup>2</sup>

The next question may seem to be of this kind: All this being so, how did the Stoic morality provide for dealing with the problems of conduct that arise in actual life? The foundations of the work being thus laid, by what rule were the details assigned? And if it is indeed a material part of the business of moral philosophy to tell people what is right and wrong in given circumstances, there is no doubt that Stoicism must be found sadly wanting. There is very little in Marcus Aurelius that could be used to throw any direct light on particular cases of conscience. But there is another view of the office of moral philosophy not wholly without supporters, which is that this task is exactly what moral philosophy should not attempt. According to this opinion the office of ethical science, so far as it has a practical bearing on conduct, is not to solve special problems, but to form a habit of mind fit to solve them in action. The object is to impart not bare precepts, but moral habits which may bear the good fruit of right intention guided by trained judgment; not to teach men what actions are right, but to make them rightminded. A healthy moral constitution may be trusted to deal with the particular cases as they arise. You cannot make yourself righteous by working out a set of fixed rules; on the contrary, when you want to know how to apply

<sup>1</sup> VI. 44.

<sup>2</sup> Cic., *De Fin.*, III. 64.

the rule in a new instance you must take the judgment of the righteous man. This conception, more familiar perhaps to the Greeks than to most of ourselves, is often present in Aristotle, and there are indications, at least, in Marcus Aurelius that it was practically adopted by the Stoics. We find the healthy moral sense expressly compared to the healthy sight or taste of bodily sense.<sup>1</sup> It is well known that the ideal *wise man* of the school was conceived as infallible in his moral judgment; this however proves nothing as to the supposed character of the process of judgment itself. But I do not think the process is anywhere represented as one of calculation from rules, save so far as an accurate knowledge of the circumstances and consequences is dwelt upon as necessary to right action; and this last has to do with the conditions of the problem rather than with the actual solution.

It is true that some of the Stoics appear to have committed themselves to what is now called casuistry, and not to have escaped the kind of odium which has become attached to the like inquiries in later times. And certainly some of their results, as handed down to us (if we could be sure that they are fairly represented), are not altogether edifying. But the displeasure they gave was due in great measure to their adopting from the Cynics an open and offensive disregard of men's common feelings. There was an original connexion between the Stoic and the Cynic schools, and though the Cynic elements of the Stoic doctrines were gradually thrust into the background, or explained away by the more enlightened leaders, yet there was always a Cynic wing, as we might now say, of the Stoics, and Cynical propositions held their ground as commonplaces long after they had ceased to be consistent with the developed and active social morality of the school. We find several times in M. Aurelius a vein of coarse and exaggerated depreciation of all ordinary objects of desire, where the argument, such as it is, consists in exhibiting them as resolved into elements which are separately worthless or disgusting.<sup>2</sup> These passages can be accounted for, I think, only as a residue of Cynic traditions. They have no real affinity with the lofty cosmical disdain with which, as has already been seen, the Stoics endeavoured to look down upon the slight and mutable things of this world, but which is consistent with an earnest purpose of doing the best one can, however little it may be, and not despising one's work for not being greater,<sup>3</sup> and which sought contentment not in

<sup>1</sup> X. 35.

<sup>2</sup> VI. 13; VIII. 24, 37; IX. 36; XI. 2. M. Barthélemy St. Hilaire's phrase, "*crudité étonnante*," is not at all too strong.

<sup>3</sup> Compare IX. 28 with the following section.

violent self-deceptions, but in an even mind. It is no Cynical prompting that bids men pray, not for the objects of desire, but for a soul free from desire.<sup>1</sup> Developed Stoicism is equally remote from the crudity of the Cynics on the one hand, and from asceticism on the other. Man's physical well-being (*ἡ ὡς ζῶον φύσις*) is not to be suppressed, but rather cultivated, in subjection however to the demands of his reasonable and social well-being (*ἡ ὡς ζῶον λογικοῦ φύσις, τὸ λογικὸν καὶ πολιτικόν*).<sup>2</sup>

The Stoic optimism and its curious consequences are perhaps the most generally known parts of the system. The Stoics, holding that the universe was governed by immutable law, which law was the expression of perfect reason and the pattern of all good, were necessarily optimists. They looked upon the universe as good in a human and ethical sense, and the Wise Man was the purposed crown and glory of creatures. And they had accordingly to face the question which every scheme of benevolent teleology has to face in some way—namely, Why do good men suffer evil in the world? The answer they gave deserves admiration for its boldness. They simply denied the fact. They said that the supposed evils are not evils at all; the common objects of desire or aversion, in so far as they do not involve ethical merit or demerit in the person enjoying or suffering, are neither good nor bad, but indifferent. This is the celebrated doctrine of *Adiaphoria*, which the Stoics maintained against all comers with great zeal and pertinacity; yet they had to admit that for practical purposes there must be such a thing as a rational preference among these indifferent things, if only because the Wise Man must needs make some choice among them; and they saved a contradiction in terms by ingenious distinctions and refinements, on the particulars of which we need not enter here. The line of thought by which the main doctrine was reached is no matter of conjecture: it is distinctly given, for instance, by M. Aurelius, when he says that nothing can be really good or bad which befalls good and bad men alike.<sup>3</sup> The topic was considered by the Stoics as one of importance on account of its practical value in strengthening the mind against the common temptations of the world, and the deliberate cultivation of *Adiaphoria*, the attitude of pure indifference towards the whole contents of the neutral field "between virtue and vice," was recommended as a point of moral discipline.<sup>4</sup> The same optimism led in much the same way to the

<sup>1</sup> IX. 40.

<sup>2</sup> X. 2. The Cynics, it has been well remarked, were not *ascetics*; for they sought not to mortify desires, but to reduce them to the least number, and satisfy them in the cheapest and coarsest way.

<sup>3</sup> IV. 39.

<sup>4</sup> VII. 31.

well-known Stoic paradoxes concerning the blessed state of the Wise Man. Since no real harm can befall the man who possesses true wisdom and virtue (it will be remembered that with the Stoics these were synonymous), and he who does not possess them possesses no real good, it follows that the wise man alone is entitled to all the honourable additions which men are accustomed to bestow indiscriminately; to him alone belong freedom, wealth, and kingship—even personal beauty was not omitted from the catalogue.<sup>1</sup>

These and kindred propositions were not taken by the Stoics in the way of rhetoric or metaphor; we are told, indeed, that the school was averse to rhetorical expansion. They were seriously maintained as literal truth, and defended with the utmost rigour of dialectic.<sup>2</sup> Still, it is difficult to believe that Stoic teachers always resisted their capacities for rhetorical treatment. Cicero has left us some specimens in this kind, and in particular a little book entitled *Paradoxes*, where he sets forth the Stoic maxims in a popular manner. It may be convenient to give the heads—they are as follows: 1. Moral good [*τὸ καλόν*, *honestum*] is the only good. 2. Virtue suffices for happiness. 3. There are no degrees of wrongness or rightness in actions. 4. Every fool [=not-wise in the Stoic sense] is mad. 5. The wise man alone is free, and every fool is a slave. 6. The wise man alone is rich.

Outsiders naturally found here a tempting field for ridicule, and were not slow to make the most of it. Serious argument was not so easy as it might seem at first sight, for the Stoic could meet any appeal to facts by explaining that there was not a real Wise Man to be found in the world. It was certain that there had been very few altogether, and it was an open question whether any one had come quite up to the mark in historical times. Socrates and one or two others were commonly admitted, and some of the Roman Stoics ventured to add Cato.<sup>3</sup>

<sup>1</sup> See, for example, Cic., *De Fin.*, III. 75; Hor., *Ep.*, I. i. 106; *Sat.*, II. iii, 45 (the whole Satire is an illustration of the paradox, *πᾶς ἀφρον μαίνεται*, No. 4 in Cicero's list).

<sup>2</sup> Cato autem, perfectus mea sententia Stoicus . . . in ea est haeresis quae nullum sequitur florem orationis neque dilatat argumentum; minutis interrogatiunculis, quasi punctis quod proposuit efficit.—Cic., *Parad.*, Proem.

<sup>3</sup> The singular parallel between wisdom in the Stoic philosophy and the state of grace in Augustinian theology is pointed out by Zeller (*op. cit.* 235). It extends even to the detail of the transition or *conversion* from utter darkness to perfect enlightenment being the work of a moment. It will be noted that the number of the elect is much more narrowly limited by Stoicism than by even the most rigid forms of Calvinism; there may not be a single *wise man* in many centuries. But then the consequences of ex-

But here, again, they made a compromise with practical needs. Strictly speaking, one must either be in the perfect light of wisdom, or in an outer darkness wherein there were no degrees. A miss is a miss, they said, whether the shaft goes a hair's-breadth or a mile beside the mark. Yet they devised the notion of a certain *proficiency* towards real excellence, which might approximate indefinitely to it in its effects, though it could never be the same thing; a kind of ethical asymptote to the unattainable ideal. All this was likely enough to degenerate into quibbling and mere verbal puzzles, especially under the influence of a fondness for the curiosities of dialectic (Cicero speaks of the Stoics as cultivating *conclusiunculae*, and see the quotation in the note above) which was characteristic of the school. The paradoxical and polemical aspects of the system acquired undue prominence in the eyes of critics and outside observers, and, I think, have retained it in modern times. It is remarkable that there is hardly a trace of them in Marcus Aurelius. So far as one can guess from his writing, Horace's jesting notice of Chrysippus's dictum that the Wise Man would be the best of cobblers, if he chose, must have fallen quite harmless upon him. May we not suppose that the men who, like Marcus Aurelius, took up Stoicism not as a literary profession but as a guide to the conduct of active life were content to leave this kind of discussion alone, or even in their hearts despised it as mere verbal trifling?

It will readily be understood, but perhaps I should expressly repeat it, that the object of the foregoing pages is not to give an exposition of the Stoic system, such as it was, or may have been, officially set forth by the founders and masters of the school, but to trace the substance and connexion of the doctrines which appear to me to have contained its working power for Marcus Aurelius and those of whom he is the type. The history of Greek philosophy is a magnificent and weighty subject, which yet remains to be worthily treated by an Englishman. My present endeavour is not only within narrow bounds in extent, but altogether in a narrower sphere. But no inquiry can be worthless which may throw any light upon the character and moral training of the men whose arts and arms, maintained by Roman energy, and touched with the fire of Greek intellect,

clusion were comparatively slight. There is a coincidence of a higher kind with Christian thought when Marcus Aurelius bids himself lead a new life from every moment, "as one that is dead, and whose past life is now finished," (VII. 56); "thou shalt be a new man and enter upon a new life" (X. 8). A not less striking parallel may be found in the Buddhist *Nirvāna*, if that (as maintained by Mr. Rhys Davids) is a state of passionless perfection, theoretically attainable even in the present life.



established the empire and the peace of Rome, and created the civilised world.

NOTE.—I may add a word here about editions and translations of Marcus Aurelius. No author wants a commentary more, but Marcus Aurelius has been strangely neglected in this respect. There is, I believe, no annotated edition later than Gataker's, which dates from the middle of the seventeenth century. The text is often difficult, or corrupt, or both; the condition of some places is probably hopeless. Besides other scholars, Corais and Schultz have done good work upon it, but much yet remains to do. The Tauchnitz reprint of Schultz's text (which is practically the only available edition for ordinary purposes) has critical notes, but the absence of all discriminating marks in the text itself is a drawback. For English readers the want of a commentary is, to a considerable extent, supplied by Mr. Long's excellent translation; not altogether, for I think, with all deference to the taste of a master in criticism, that the Greek has, if not exactly a charm, yet enough of a "distinct physiognomy" to keep one from leaving it on the shelf. One can only regret that Mr. Long's notes are so few and brief. A new French translation has been published by M. Barthélemy St. Hilaire (Paris, 1876). The version is more finished in style than Mr. Long's, but often at the cost of exactness. Corrupt passages are slurred over, for instance, in a way quite inadmissible according to English notions of scholarship, by guesses at the general sense which do not stand for any particular reading. There is a running commentary, which does not attempt any specific tracing of the various Stoic doctrines, and does attempt, with very indifferent success, to find in M. Aurelius the tone and arguments of a modern French philosopher of the *spiritualiste* school. The notes, in fact, are rather homiletic than exegetic. The object appears to be simply to reproduce the book in a form suited for modern use as an aid to moral reflection.

FREDERICK POLLOCK.

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#### V.—PESSIMISM.

IN offering the following remarks on Pessimism, my object is not to advance any new arguments in its support, but only to review that critical survey of the doctrine which has recently been made by an English writer. Pessimism, as is well known, has of late been gaining ground both in Germany and elsewhere, and in view of this fact Mr. James Sully has presented us with an examination of the doctrine in a work entitled *Pessimism: A History and a Criticism*. Three points in particular have been dwelt upon by him: first, the systematic proof which the doctrine has found in the works of Schopenhauer and Hartmann; secondly, its chance of realisation in the present and future; and lastly, the conditions of its genesis in the individual mind, and the causes of its rapid propagation. Mr. Sully especially attacks the *Philosophie des Unbewussten* of E. von Hartmann. As this work has not yet been translated into English, it is hardly

possible for English readers to estimate the justice of the charges that Mr. Sully has brought against it; and hence they may not be unwilling to listen to a voice out of the pessimistic camp raised in defence of its leader.

To the unreflective mind in the juvenile age of individuals as well as of the race, life in itself is no problem: it is a self-evident thing—that which must be, and cannot help being. But when pain, sickness, hunger, death appear, then come doubts and questionings, stirring that feeling of *wonder* which is destined to become the mother of philosophy. Thus does meditation on the misery of life beget philosophy, while at the same time it prompts the desire to vanquish that misery, as a thing which ought not to be.

Mr. Sully in the first four chapters of his work gives an account of the struggles between pessimism and optimism, which will interest many readers. As we approach the present time, we find the voices of unreasoned pessimism swelling in number, while philosophic pessimism recedes more and more into the background. Schopenhauer first fully recognised the claim of pessimism to be regarded as an integral part of the system of philosophy; Mr. Sully, accordingly, next expounds his system. In relation to pessimism Dr. Hartmann<sup>1</sup> may be considered the successor of Schopenhauer, but in respect of the principles of his system he can no more be called the successor of Schopenhauer than of Hegel. All that can be said is, that as every vital system of philosophy must assimilate the main ideas of its predecessor, so Hartmann's is a higher synthesis of Schopenhauer's 'alogical' will and Hegel's logical idea as attributes of the unconscious spirit. It is an error in Mr. Sully to class Hartmann with Bahnsen and Frauenstädt as disciples of Schopenhauer<sup>2</sup>; while he obscures the metaphysical and psychological proof of pessimism by constantly mixing up the doctrines of Schopenhauer and Hartmann, the part played by Will in the systems of the two being entirely different.

Mr. Sully next gives a short biographical sketch of Hartmann, with a brief analysis of the *Philosophy of the Unconscious*. In composing this work Hartmann addressed himself less to the limited circle of professional philosophers, than to the large body of readers, happily still to be found in the "land of thinkers and poets," who are interested in philosophical questions. Partly on this account, and partly as a consequence of the inductive method employed, we find explanations given in the first and

<sup>1</sup> Hartmann is *Doctor honoris causâ* of the University of Rostock.

<sup>2</sup> It is also an error to call A. Taubert a disciple of Schopenhauer. Taubert's view of the world is based entirely upon Hartmann's philosophy.

second parts of the work which either have a merely propædæutical value or which, though well fitted to elucidate the successive steps of the induction, are seen from the higher levels afterwards reached to be self-evident, not to say, tautological. Now, Mr. Sully, in examining the work, points out first these passages which are generally unimportant; and, instead of indicating the fundamental principles of the system and the consequences drawn from them (the only way to give in a few pages a sufficiently clear exposition of a philosophical system), he follows the successive steps of the induction, sometimes crowding the contents of a whole chapter into a single sentence. The result is, to give the reader not only an inadequate, but a decidedly distorted view of Hartmann's great book.

Here the historical part of Mr. Sully's work ends. In Chapter VII. he begins the criticism of the metaphysical proof of pessimism. Like Hartmann—though from a very different motive—he designates the problem of pessimism a eudaemonistic or hedonistic one. As the ethical worth of the world is of account only as it influences the feelings, he shows that hedonism is the only principle whereby we can try the solution of the pessimistic question. Would the non-existence of the world be preferable to its existence? Pessimism, according to Schopenhauer and Hartmann, follows *à priori* from the nature of Will, as the principle of life. Every act of will refers to something which does not yet exist, else it would not be necessary to will it; and as long as the volition does not procure its satisfaction, there is a state of longing, restlessness. All these terms are of course but similes when the satisfaction of will is an unconscious representation. If a volition can become satisfied, it must be at the cost of another volition, which is proportionately repressed in its sphere of action. In the region of conscious life, whether the aim of will be the mere maintenance of life, or the realisation of an idea, it is at all times and at all points in collision with other volitions, tending in opposite directions, and those that give way in the struggle react as pain. Schopenhauer was content to deduce the misery of life *à priori* from the principle; but Hartmann, proceeding inductively, offers an *à posteriori* proof. Nevertheless, he also has his *à priori* treatment, and thus, when Mr. Sully attempts to undermine the metaphysical and psychological bases of German pessimism, he has to deal with the metaphysics of both philosophers. Metaphysical systems, in Mr. Sully's eyes, are mere outgrowths of poetical fancy, without any claim to a relatively objective truth. He grounds this opinion on the fact that new systems are continually springing up; but he does not see that there is something common to all, which is ever developing and

growing in breadth and depth. Acknowledging no objective spirit, he does not understand how philosophy is the development of the self-consciousness of the Absolute in the multitude of individual minds. The impulse, rooted in the deepest ground of our nature, to inquire after the *causae causarum*, to advance from the phenomenon to the noumenon—this most lofty of the impulses common to men—is to Mr. Sully a weakness, and in his optimism he hopes that a time will come when it shall be conquered (p. 153), and men will be satisfied with the knowledge sufficient for the practical relations of phenomena to each other.

But as long as this impulse, which Schopenhauer calls the "metaphysical want," exists in most men, Mr. Sully holds it to be the prime task of philosophy to show that it has no right to exist, since all that we can know is that a gulf yawns between our empirical world (of subjective representations) and its transcendental essence. Now against a dogmatism which lays claim to the possession of absolute truth, it is clearly open to object on the ground of subjective idealism. Accordingly, when Schopenhauer, notwithstanding his idealism, asserts that we are immediately conscious of our will, Mr. Sully does well to point out that we do not know our will otherwise than as a representation—as an object, like our Ego, among other objects. Hartmann, however, in his philosophy is no dogmatist; on the contrary, he ever seeks to combat dogmatism. The critical ground he takes up is indicated in his work *New-Kantianism, Schopenhauerianism and Hegelianism*, while his position relative to the different theories of knowledge, especially to Kant's subjective idealism, is shown in his *Foundation of Transcendental Realism* (1875), and in a criticism of Von Kirchmann's *Theory of Perception* (1875). We are willing to suppose that Mr. Sully did not know of these works when he wrote the airy sentences on p. 454.

From the point of view of subjective idealism metaphysic is an impossibility. If time, space, causation, relation, existence, &c., have as forms of the mind an exclusively subjective signification, without being forms of the *Ding-an-sich*, then of course we neither have the right to construct a world by deduction from an *à priori* principle, nor can we hope to reach one by induction. But if subjective idealism is right, and metaphysic an impossibility, then, since all we think is but our thought, natural science, as it is generally understood, is also impossible as *science*. For as it is the science of the real, independent of the subjective, and has nothing but our representations for its objects, natural science can only be the science of human modes of thinking and representing. Nay, even such a science becomes questionable, if we follow out subjective idealism

to its logical conclusion in solipsism and illusionism. If I have the right to suppose a subject—my Ego—behind my representations; if I further have the right to suppose the existence of other subjects, independent of my representations, but analogous to my own subject,—then I also have the right to suppose things-in-themselves behind my representations, as their causal conditions. Let it be observed, I only say, *If I have the right to use Kant's categories transcendently.* Should I assert this right as self-evident, I fall into the dogmatism of naïve realism (as the older materialism does); should I deny it, I sink into the hopeless abyss of illusionism, or into scepticism, which is also a negative dogmatism. If, on the contrary, I am convinced that my nature is not a mere colossal humbug, whose very existence I can rightly neither affirm nor deny, but corresponds to an objective truth, if by the very constitution of my mind I am forced to suppose things-in-themselves behind my representations as their causes, then I stand on the ground of transcendental realism, a doctrine which modern natural science, more or less consciously, accepts. Mr. Sully never tells us what his own theory of knowledge is. Will he doom metaphysics because its constructions are founded on mental representations? Then the doom must equally fall upon science also, since we never can travel outside our perception and thoughts, outside our senses. On p. 170, Mr. Sully says, "our minds have received their structure in connexion with this very order of things, which is to be accounted for; consequently, all ontological deduction of the world has to be carried out by help of conceptions drawn from this very world itself." This, however, is far from being a proof that mind cannot acquire any real knowledge; the essential identity of the subject with the object to be known is the very condition of the possibility of knowledge—and the conditions of the possibility of knowledge form the first principles of all the modern systems of metaphysic.

Having pointed out the worthlessness of metaphysic in general, Mr. Sully might have saved himself the trouble of criticising in particular the metaphysical doctrines of Schopenhauer and Hartmann. It is easy to show the contradictions in Schopenhauer's system, yet, besides the error above mentioned, Mr. Sully refers only to his obscure scheme of Platonic ideas. He does not mention Schopenhauer's greatest mistake of all—the attempt to combine materialism with subjective idealism by declaring the intellect to be the product of matter, and matter itself with the entire empirical world to be the product of intellect.

Passing next to Hartmann, Mr. Sully finds everywhere contradictions and fallacies, which are mainly due to his own mis-

understanding. Whenever Hartmann makes use of a simile to illustrate a difficult conception, he at once lays hold of it as an opportunity of reproaching him for his "mythological fancies" and "anthropomorphism". When Hartmann, starting from the conception of the world as a process of evolution, and from the relation of the logical idea to the 'alogical' will, arrives at a negative conclusion, namely, the cessation of volition, the end of the world's existence, the reduction of actual being to potential being; and when further, after carefully explaining that he by no means thinks of predicting what will actually happen, he tries to show how an end of the world-process might be conceived,—Mr. Sully takes it all as a positive statement, and ridicules him accordingly.

The two chapters in which Mr. Sully undertakes to undermine the scientific basis of pessimism, after having, as he believes, overthrown metaphysic in general and the doctrines of Schopenhauer and Hartmann in particular, present a jumble of sophism and prejudice, which it would need a whole treatise to unravel. We can here only briefly refer to his way of demolishing the well-compacted system of the Monism of Will. He seems to believe that a thing or an action has but to be denominated differently to cease to be what it was. According to Schopenhauer and Hartmann, all force is will; the atom is a single act of will. Mr. Sully admits that "if force were proved to be a reality in the physical world, we should, by the very limitation of our minds, be compelled to think of it in terms of our volitions"; but force is "in science proper nothing but a serviceable fiction".<sup>1</sup> If now, according to Mr. Sully, science does not know force, what then is the ultimate and fundamental phenomenon, of which the whole empirical world is the product? *Motion*, he replies. But motion can only be understood as the function of a subject. Even supposing it could be empirically shown that the elementary qualities, heat, light, &c., are caused by motion, we should still have to face the questions: Whence these motions? What is their cause, and what are they? The conception of motion does not dispense with the conception of force; there would be no motion if there were no force. Force, whether we call it so, or call it will, is a metaphysical conception, which seems to natural science a somewhat shadowy thing, that might well be excluded from its sphere. And physics is indeed justified in banishing force from its territory; but the attempt to blot it out of existence is an inroad into a higher sphere, which it is necessary to repel. Mr.

<sup>1</sup> Force as an entity is a fiction, but force as a phenomenon is thoroughly real, and to Hartmann the act of will is simply phenomenal.

Sully acknowledges no force and hence no will, only *conscious volition*; but volition, as defined by him, is not genuine will, no real volition. It is only a *perception of will*, accompanying a mechanical action. This is plainly enough stated on p. 202: "The great doctrine of the conservation of energy, carried out to its logical results, has led to the theory of animal and human automatism, namely, that all the actions of our bodily organs, voluntary as well as involuntary, are fully explained as the results of mechanical processes." What stamps certain mechanical actions of the human organism as acts of volition, different from mere "spontaneous movements" (not a happy expression for a believer in automatism to employ) and from "instinctive impulses," is simply a conscious perception (1) of its motive, (2) of the aim of the movement, (3) of the character of the action, either as an immediate means to the object in view, or as a link in a chain of means to that object. To be consistent, Mr. Sully should declare volition also to be only a useful fiction, unless he is prepared to acknowledge all bodily functions to be acts of will (volition proper). But this is what he cannot do, for, as he truly says, there is no volition without a representation, and he will not admit *unconscious* representation. Consciousness and perception are synonymous to him; while he tries at length to persuade us that there are no unconscious perceptions, with the effect, however, only of showing us that consciousness is not unconscious, and that he has misunderstood Hartmann's conception of unconscious representation as the *ideal form of real existence*.

He even denies the relatively unconscious, that is to say, the consciousness of the different nervous centres within an organism, which is asserted by Hartmann in the same sense as by Helmholtz, Maudsley, Lewes, and other men of science. It would perhaps be more consistent to go back at once to Descartes, and deny consciousness altogether to the lower animals; for not possessing self-consciousness, they cannot tell us of their consciousness.

Hartmann's view of consciousness as springing from the conflict of will seems to Mr. Sully fallacious, but he himself avoids fallacy only by taking the easy course of having no theory of its genesis, and so saving himself the trouble of explaining how a purely spiritual moment, like a conscious representation, can set in motion the bodily mechanism. Without such explanation, it is idle to tell us that the pessimist falls into the blunder of supposing that will is the parent, instead of the natural and necessary foe, of life's misery, inasmuch as it partly crushes, partly satisfies, desire and longing and other unpleasant feelings, at the same time that it directly



aims at the attainment of pleasure. Just as if pessimists ever doubted that the will makes for pleasure and avoids pain! If each act of will could extort its own satisfaction, the world would be a paradise, and there would be no pessimists. But it is just this satisfaction that is difficult of attainment in a world of conflicting acts of will.

We come now to Pleasure and Pain. According to Hartmann, Sensation is a special mode of consciousness. Pleasure and pain, on the physical side, are intensified forms of the specific affections of the different organs; on the mental side, they are intensified reactions of will upon representations. Unsatisfied will is pain, whether the accompanying representation is conscious or (as in the case of many uncertain and indefinite feelings) unconscious. But unconsciously satisfied will yields no pleasure; it is only when the consciousness is sufficiently established to allow of representations and sensations being compared with each other, that the satisfaction of will becomes known as pleasure, as a higher feeling than mere painlessness, which is the normal state. By this conception of pleasure and pain, Hartmann's doctrine that the difference between the two is merely quantitative, not qualitative, loses much of its apparently paradoxical character. On this point Mr. Sully has unpardonably misunderstood Hartmann. He says, p. 120: "Hartmann's account of the manifestations of the Unconscious in pleasure and pain is extremely curious. Pleasures and pains are perfectly homogeneous states, differing in quantity only!" But Hartmann says no such thing. What he really says is, that pleasure and pain as such, *i.e.*, apart from their causes and contention, show, *each within its own sphere*, merely quantitative, not qualitative, differences.

To understand what pleasure and pain really are, Mr. Sully refers us to "any respectable text-book in psychology". "Pleasure and pain are found to arise from certain modes of bodily and mental activity, which are variously defined as those which promote or hinder function." This, however, is an explanation which is only applicable if matter and mind are conceived as one identical substance. From the standpoint of a vague dualistic automatism (pp. 177 and 465), pleasure and pain can be nothing but the signs of approbation and disapprobation on the part of the concrete mind, when the latter, in some mysterious way (heaven knows how!), perceives that its seeing, hearing, speaking, and walking machine is working smoothly, or the reverse. We are far from denying, and Hartmann himself admits, that pleasure often does accompany the promotion, and pain the hindrance, of organic function, but promotion and hindrance are not at all times causes of

these feelings. Pleasure may just as well be the cause as the consequent of physical well-being; and if pain is often the offspring of bodily disturbances, it is just as often their parent. Moreover, how is this doctrine to account for the fact that pleasure of a high degree can co-exist with conditions that are destroying health and life? If in this case the pleasure does not arise from the satisfaction of a higher will than is in the cells or organs, it is altogether inexplicable. Again, even on Mr. Sully's own supposition, we can establish an evident excess of pain, the very thing that he disputes. The organism is at all times and from all sides exposed to dangerous influences, both natural and artificial, which hinder and destroy its well-being, and may even depress it for long periods to a state little above death. The influences that promote physical well-being, on the other hand, have to be looked out for and provided, and after all can do no more than raise life to its normal state. This normal state (which is paralleled, in the case of species, by adaptation to natural conditions in the struggle for existence) is the least we can get on with, and it is only our familiarity with pain that makes it appear as positively pleasurable. Every attempt to raise the state of well-being beyond the normal point leads again to pain, though perhaps in another sphere, as when certain spiritual pleasures disorder the bodily energy or *vice versa*.

If Mr. Sully thus far, in controverting the pessimistic theory, advances nothing in support of optimism, he is no more successful in his strictures upon Hartmann's arguments for the preponderance of pain. Hartmann maintains, (1) that through irritation and exhaustion of the nerves pain becomes more and more painful the longer it lasts, while positive pleasure in the like case is lessened and, prompting the will to seek relief, gives rise to a new pain if relief is not found; (2) that satisfaction of will is recognised as pleasure only where the individual mind is advanced enough to compare the different states of sensation, while the mere fact of unsatisfied will is consciously felt; (3) that the relief which follows a pain constitutes the highest degree of pleasure; (4) that the pleasure of satisfaction is only a fleeting one, while the pain of non-satisfaction lasts as long as the effort of volition. Mr. Sully strives to show that the pleasure that follows relief from pain is a real pleasure, and not mere painlessness. This Hartmann does not doubt, but he holds that, in any general estimate of the value of life according to the balance of pains or pleasures, the whole amount of such pleasure is not only not sufficient to outweigh pain, but is not even enough to redress the scale. Were there no pain in the world, there would not be

any of this negative pleasure; but that it would be a good bargain to get rid of all positive pain at the cost of all such pleasure, will be doubted only by those who would assert that poverty is desirable in order that the rich may enjoy the pleasure of almsgiving. With regard to the first of Hartmann's arguments for the preponderance of pain, Mr. Sully admits the fact, but finds in it an argument against pessimism, since the insensibility produced by nervous exhaustion destroys the pain and diminishes the discontent at the absence of pleasure. Now it is true that there is a certain degree of pain at which insensibility sets in. But terrible suffering must be endured before the nerves are paralysed, while as the field of irritation spreads and new parts are affected, though the first may have become insensible, those last attacked are but just beginning to torment. After all, too, this painless exhaustion yields but a short respite: as soon as the nerve has recovered its energy, suffering begins again; or if the complete destruction of certain nerves, or of whole organs, does really bring permanent relief, then it is attended with peril to the existence of the individual. Physicians do not regard the cessation of pain as a favourable symptom as long as the source of the irritation remains or has become intensified. In Hartmann's view, although it is hardly possible to determine the equivalence of a certain quantity of pleasure to a certain quantity of pain, yet "the pleasure must be considerably greater in degree than the pain, if the two are so to counterbalance each other in consciousness as to amount in combination to the state of indifference, and be preferred to this if the pleasure is a little increased or the pain lessened". The true measure of the comparative value of pain and pleasure is the readiness with which a pain is accepted for the sake of an antecedent or succeeding pleasure, or a pleasure sacrificed to avoid such a pain; and even so there will be all manner of individual differences. Yet the mere possibility of such comparison implies an habitual endurance of pain, for to the naïve mind every pain, if it is anticipated with any degree of accuracy, is absolutely great; or if often the opposite seems to be the case, this is due to the careless disregard of pain and determined exaggeration of the value of pleasure.

So much for pleasure and pain of the same kind: it is a still more difficult matter to furnish a standard of comparison of sensual pleasures or pains with mental pains or pleasures. For here the estimate will vary even more with differences of character and intelligence. We are not surprised to find Mr. Sully at variance with pessimists on this head also. - He acknowledges its difficulty, but hopes to get over it thus:—"The simplest method is to make the antagonistic feelings

simultaneous. In this case it will be found that when they are of equal intensity, they tend to neutralise one another, that is, to produce a resultant state of feeling which has a zero-value." *Probatum est!* It is a pity Mr. Sully does not deal in concrete examples, else we should have liked an illustration.

If, again, we turn from pain and pleasure to their causes, we shall find, as a general rule, that the natural and artificial circumstances that are productive of pain are present everywhere and at all times, while those productive of an overbalancing pleasure are limited and difficult of attainment; unless indeed we are content to regard the mere painless modifications of organic sensation as pleasures, as Mr. Sully does with the visual impressions of form and colour. As for *ennui*, on which Schopenhauer laid so much stress as the foe of human well-being, Mr. Sully regards it as only "the penalty inflicted on us for the non-fulfilment of some normal function, or the reminder which is given us by the natural impulse of an organ to discharge its recruited store of energy". Now certainly *ennui* is not in the common sense of the word an external evil, like poverty or sickness; but the circumstances that prevent us from actually removing this removable evil are very often either social or political ones, or are material organic conditions of our own body which are outside the mind of the individual. Many evils might be annihilated, if we so willed with all our power; unfortunately it only too often happens that we cannot will that which is reasonable and, if not positively pleasurable, at least painless. This troublesome question of the *Nicht-wollen-können* will, however, meet us again. Meanwhile, let us turn to Mr. Sully's criticism of Hartmann's *à posteriori* proof.

First of all, we are told that Hartmann himself "cuts off the surest avenue to the facts" by rejecting "individual testimony as an untrustworthy source of information on the subject," men being disposed "to magnify the value of life through the very action of unconscious will". Mr. Sully here misunderstands Hartmann. The latter simply warns us against a false estimate of the past life, past pains being so readily underrated *because* they are past; whilst the passing pleasure is greatly magnified. We see this happy gift of the human mind well displayed in the frequent talk of aged people about "the good old times". If it were possible to examine hourly a large number of men as to their actual general feeling during a long time, and to put on record the result, Hartmann would have no objection; but the result would be very different from that yielded by the beautified notes of memory. It is only in this sense that Hartmann attaches a superior value to objective testimony—not from any disposition to make light of the individual's experience.

Hartmann's view of the various circumstances of life does not commend itself to Mr. Sully. He gives the list: (1) Health, youth, liberty and material sufficiency; (2) Hunger and love; (3) Pity, friendship and family happiness, (4) Pride, ambition and desire for dominion; (5) Religious edification; (6) Immorality; (7) Enjoyment of science and art; (8) Sleeping and dreaming; (9) Pursuit of wealth; (10) Envy, vexation, &c.; (11) Hope; and then exclaims, What a classification! But, though the reader may expect it, he does not offer a better one. It was, in truth, no part of Hartmann's intention to review all the internal and external circumstances and conditions of life that result in feeling. He held that an *à priori* proof, based on that of Schopenhauer, but modified at some points, was quite sufficient for his purpose. Having adopted the inductive method, however, he felt that some amount of *à posteriori* proof was necessary, and so he dipped into the abundant materials at his command, in a way indeed that may seem superficial to the hypercritical. Mr. Sully especially objects to Hartmann's comprehensive treatment of labour, and to the omission of "motor activity," "genuine humour," and "the daily fulfilments of obligation of all worthy citizens" as sources of happiness "both to the agent and to others". But, when Hartmann says that labour generally brings more pain than pleasure, he understands *labour as such* and apart from the aims whose attainment, or even the mere hope of whose attainment, is or may be pleasurable. When Mr. Sully speaks of labour as a source of happiness, he means the aim arrived at. When a workman enjoys his labour, it is the thought that the produce of his toil will protect himself and his family from want, with the hope that a time may come when he may live without this labour, that is the real source of his enjoyment. It will also satisfy his ambition to see his handiwork sought for and acknowledged, while, if his work is such as to admit of the display of inventive fancy, "the interest of pursuit" (as Mr. Sully rightly suggests) will be satisfied as he realises the ideas of beauty or utility in his works. Work, however, as mere bodily activity, is hardly a source of pleasure. If the physical condition is good, the pleasurable feeling of health is not readily disturbed by it, though even here fatigue is apt to set in towards evening, while in the case of the elderly, the weak, or the sensitive, the fatigue may even extend itself to the first working hours of the succeeding day. So to the professional man and the man of business the labour of each day is pleasurable chiefly as satisfying their desire for wealth, self-respect, ambition, and vanity, or the loftier sentiments of patriotism, humanity, and love to their fellow-creatures. The case of the agricultural labourer or the factory hand is somewhat

different; the pleasure of their daily work being limited to that of winning their daily bread, or, at the best, satisfying their self-respect and vanity. It is only in the field of the fine arts and sciences, and not always even there, that we find, as Hartmann himself is careful to admit, work as such to be a pleasure. As for that which Mr. Sully sets down as the most important ingredient of happiness, namely, "what is known as mental tone or the underlying sense of well-being," this ought clearly to be reckoned under the head of health, which stands first in Hartmann's classification. Health and the accompanying feeling of well-being are simply conditions that *ought to be*, life being presupposed as necessary, and in general we do not think anything about them until we are deprived of them. Even where they may be deemed as positive pleasures, as in the aimless gambols of children and young animals generally, there is mixed up with them another motive to pleasure, namely, the play of merry fancies, expressed by inarticulate sounds, or movements of the countenance. The equilibrium, however, so essential to well-being is easily disturbed, so that by the time the juvenile stage is past a feeling of lassitude and heaviness, a residuum of pain in all the organs except those of the special senses, is nearly always present, though in so slight a form in the so-called healthful state as to be covered by the manifold impressions of the outer world, and to emerge into consciousness only during moments of reflection and solitude.

It is another mistake of Mr. Sully's to suppose that muscular exercise is the source of pleasure in the arduous sports of boys, or in the chase and long pedestrian rambles of grown men. In the case of the former it is the social impulse and the desire of showing strength and adroitness that give to their games their chief stimulus and satisfaction. In pedestrian rambles, again, the pleasure does not lie in the mere act of transferring the weight of the body from one foot to the other throughout a certain space of time, a pleasure which might equally be enjoyed by the recruit in the drill-yard, or the prisoner at the treadmill. The pleasure comes from the change which rambling brings to sedentary people, living in towns: the farm-servant, who daily walks behind the plough, finds his pleasure rather in rest or in simple rural games.

As for humour and laughter, no one, certainly no German pessimist, will doubt the value of the power "to transform all the lighter evils of existence into sources of an after-gaiety". Genuine humour, indeed, is bound up in an especial manner with pessimism, the object of laughter being generally something that *ought not to be*. Throughout the whole range, from the

harmless merry laugh to the scornful laugh of despair, we find the same cause—the incongruity of a certain reality with the representation or idea which we or others have of it. And, though it is pleasant to laugh, we generally laugh at somebody's cost, and feel that as pleasure which gives pain to another. If laughter takes its motive from poetry, it falls within the domain of art; and a philosopher with Hartmann's artistic gifts is little likely to undervalue whatever thereto belongs. He only draws the limits of the fine arts more strictly than Mr. Sully does, banishing from their sanctuary those feelings of vanity, ambition, curiosity, love of the adventurous, &c., &c., which are sometimes imported into them. Mr. Sully has nothing to say about Hartmann's other divisions of hunger and love, of pity and family happiness; the need of concrete treatment becomes too pressing for him there. He censures Hartmann's examination of grief and vanity, and with the remark that "the reader is by this time, perhaps, pretty well convinced of the utterly flimsy and meretricious character of Hartmann's examination of human life," he passes on to consider the conditions of happiness in the future.

Mr. Sully finds that, in spite of all the efforts of philosophers from Aristotle to H. Spencer, "a systematic science of hedonics has, as yet, no existence," and he aims at supplying the want by "a truly scientific attempt to define happiness and its conditions, and to determine whether the average external circumstances of human life realise these conditions" (p. 263).<sup>1</sup> Now at first sight it does certainly seem easier to determine whether a person is happy than to say whether in the same person's life pleasure has predominated over pain; not because happiness is simply "a peculiar compound of pleasure" (p. 279), but because happiness may include a certain amount of pain, without ceasing to be counted as happiness. According to Mr. Sully, "a wise man" will not aim at single pleasures, but at those fixed and permanent relations of life which are ever sources of pleasure and safeguards against pain, and which, from being the

<sup>1</sup>Let us note, in passing, one piece of inconsistency. When criticising the theory of Schopenhauer and Hartmann that pleasure and pain are the contentment or non-contentment of an act of will, Mr. Sully, it will be remembered, advised his reader (p. 221) to consult any respectable text-book in psychology, to learn that this theory is fallacious, and that pleasure and pain "arise from certain modes of bodily and mental activity, which are variously defined as those which promote or hinder normal function" &c. On p. 272, however, he has changed his mind, and points out how inadequate this doctrine is to explain the facts of feeling. There is good ground for the hesitation, but Mr. Sully should have remembered this when he previously opposed a theory which not only recognises the truth of the other doctrine within certain limits, but supplies its deficiencies.



originators of happiness, come to be identified with it. Surveying his mental and physical faculties, he will strive to gain wealth and riches; for the satisfaction of his inner life he will surround himself with friendship and love; and with works of charity—so far as they do not disturb his personal comfort—he will gratify his sense of pity. He will seek to counteract the bad influences of weather and climate by hardening and training his body, and enlarge his ability to enjoy mental pleasures by the acquisition of knowledge, which extends his mental horizon and improves his artistic skill. He will render his mental life, the sphere of sensations, thoughts and fancies, happy by the power of conscious volition, being careful to exclude all painful and sad representations, whether recollections or anticipations, and to cultivate sweet memories and hopes of a future more and more bright. Nor is it merely the attainment of these ends that is to be called happiness: the very act of striving after them is a source of felicity, since all (?) the varied activities of self-culture and bodily training are pleasurable. Thus, “when all the worst evils of life, such as sickness, bereavement, &c., are averted—when the conditions of large schemes of agreeable activity are present, when the person concerned manifests an habitual pleasurable interest in the events of the world which immediately surrounds him, and when the whole key of life is that of quiet, unflinching devotion to large, inspiring and yet rational ends, we may be said to have a fairly unambiguous presentation of human happiness”. “Observing such a type of existence, we take upon ourselves to assure the person that he is and must (!) be happy at moments when he is disposed to doubt the fact.” “We have the fact that happiness has been and is now being realised. By this fact alone the fundamental idea of modern pessimism is amply refuted.”

So far Mr. Sully, to whom we would say in reply: The fact that there are persons, and will be, at least as long as the development of our earth goes on undisturbed, whose life is to be declared a happy one, is not denied by pessimism. But the question with the pessimist is: (1) Has such a happy life really a higher value than pleasureless, but also painless, non-existence? and: (2) If happy life really is preferable to non-existence, what is the proportion of this self-justified existence to that which we may call unjustified, as not including a greater amount of pleasure than of pain? To the philosopher, existence is not more reasonable, has no higher value, than non-existence; existence can become superior to non-existence only by its content. Mr. Sully everywhere conceives life as something that ought to be. This no doubt it is to the simple

unreflective mind, from the fact of its being willed. But the point to be settled is, whether this willing is justifiable.

Mr. Sully makes the victory for optimism too easy when he claims the simple normal action of the senses as positive pleasure, and asserts that labour as such brings more pleasure than pain. Self-culture and mental improvement likewise are regarded by him as in themselves pleasurable. And, no doubt, in many cases the victory our reason gains over our instincts or over our bad impulses and habits, is accompanied by a pleasurable feeling of satisfaction; but in other cases the suppression of impulses condemned by reason is so painful that the succeeding pleasure would be no equivalent for it, if the future consequences were not taken into account. Besides, reason does not always get the victory, having often to be contented with such gains as only vanity can find satisfactory. Notwithstanding this, Mr. Sully conceives the way to happiness as a state of happiness itself, though he has to admit (p. 349) "that the quality of the happiness reached by most of those who are undoubtedly worthy to be called in a sense happy is anything but high if measured by an ideal standard". The question, then, as to what chance the majority have of securing this modest happiness becomes the more pressing. Mr. Sully allows further that "there are many persons who cannot, by any stretch of probability, be pronounced happy," the fact of suicide, of struggle with want and difficulty, and of sickness everywhere, sufficiently proving this. As one of the hindrances to happiness, he mentions the "gloomy temperament which seems to incapacitate one for accepting any of the cheering gifts of life," and adds, "oftener it is a weakness of active impulse and of will which shuts the person out from all those fields of interesting occupation which are the sole guarantee of an enduring happiness". Thus millions of men never have the opportunity of tracing a reasonable plan of happiness, though their heart craves intensely for it; and they struggle painfully to seize it by single unsystematic, and therefore useless, efforts. Now to us it seems quite as great a misfortune to miss the path to happiness, as to have no path at all. Not only are there many who refuse to see the way to happiness, there are also many who *will* their own misery and with full consciousness tread the path to unhappiness. And what more tragical fate than to be forced by one's inmost nature to struggle for that which to the struggler brings nothing but pain and destruction? Mr. Sully takes too superficial a view of the doctrine of determinism when he says it merely declares "that men will not aim at a thing till they feel the appropriate motives—in other words, till they begin to wish to possess it". For when the way which leads to happiness is clearly known, how many obstacles

have to be overcome, how many enemies conquered, before the goal is reached! Even the mere protection against want is not so light a thing as Mr. Sully seems to think. Those who suffer from hunger and cold in our large towns, and the starving thousands of India, are they all people who did not will to work? Is it the case that the man, whose deepest feelings of love, friendship and trust in mankind are wounded, can seek and find satisfaction and happiness in other directions (p. 353)? Is sickness, whether of ourselves or those we love, less painful because, as "wise men," we are sure that under given circumstances a certain thing may or must happen? Are "the rough street Arab" and "the ragged urchin" (p. 351) really less to be pitied, because in moments, when the stomach does not rebel, the busy world around them makes them forget their miserable condition and the fact that within six hours they will be hungry without the means to satisfy their hunger? As regards death, Mr. Sully holds that, so far from being considered an evil, pessimism should laud it as the saviour from life's misery; while the consciousness of the shortness of life and of the certainty of death, instead of making life less valuable, should really enhance its pleasure, as long as it lasts. To the pessimist, who has learnt to look upon life from a philosophical point of view, his own death is indeed no evil (we say nothing here of the manner of death); the summons to quit the ranks of the great army of sufferers is welcome, if only it does not bring too great sorrow to others. The death of those we love is, however, at all times an evil, even when we comfort ourselves with the thought that they are now safe from fate's cruel blows, nor can any pessimistic phrases make it otherwise; while to the optimist, death is an evil *κατ' ἐξοχήν*, whose very thought is the destroyer of every joy. The frivolous and stupid may succeed in forgetting it, but never the "wise man," in face of the thousandfold reminders that surround him.

Turning next to the question of future progress, it is Mr. Sully's opinion that this "is a much more definite and tractable problem than that of the relative amount of happiness and misery co-existing now or at any past period in the world's history". And "if progress makes for an increase of happiness, it matters but little what are the exact proportions of joy or sorrow in the world at this fleeting point of time. Provided only happiness be shown to be possible under certain conditions, the demonstration that the onward movement of things tends, however slowly, to the fuller realisation of these conditions suffices to redeem the world as a whole from the damning charge of the pessimist." This, however, can only be admitted, if it be proved, first, that the peculiar conglomerate of feeling

which Mr. Sully calls happiness, seems to an intellectual mind really preferable to the insensible state of non-existence; and, secondly, that what we call progress really acts in the supposed direction. But this Mr. Sully has not succeeded in proving. What makes his "wise man" an especially happy man is his bondage to illusions, his light-mindedness, which in spite of all present disappointments lulls him again and again in the flattering hopes of a better future, and his never-ceasing impulse to action, which prevents him from self-reflection. But if the man in question is really a wise man, sooner or later the moment of disillusion will come, and it will then be of no use to assure him, as Mr. Sully does, that he is and must be happy. To meet this contingency, Mr. Sully can only suggest a sustained faith in a happier world to come, or, failing that, at least in a happier future of posterity. It is this future that we will now for a little consider.

Historical progress is but one aspect of progress in nature generally. The idea of evolution, long since adopted in philosophy, has become familiar in natural science, especially through the labours of Mr. Darwin and his theory of natural selection. It is not for us here to judge how far this theory, as a mere mechanical principle, is able to account for the origin of species. Suffice it to say that modern philosophy, with Hartmann at its head, acknowledges the fact of the progressive influence of natural selection. Now in man evolution seems to be limited to a higher development of the brain and a finer construction of the nervous system. This improvement is the correlative of a higher intellect, a superior mind, which is the true mainspring of historical progress. Were history determined by the natural passions only, there would be nothing new under the sun; all progress depends on an increase in intelligence, producing *new motives* to which the lower passions attach themselves. It is not, however, the case, as Mr. Sully seems to think, that the operation of natural selection within the mental sphere tends to make the process of evolution at all less cruel. When the earliest prehistoric races overcame their animal kindred, from which as yet they differed but little, by greater versatility and shrewdness, or when they fought among themselves with teeth and fists, the pain of defeat in such rude struggles was no greater than now when we fight with lead and iron or the arts of diplomacy, or when by superior industry one nation compasses the ruin of another. The extinction of one species by another more prolific does not seem to have been attended by more suffering than is involved in the rivalry of races, even though the doomed race is allowed slowly to starve according to peaceful treaty and amid assurances of the kindest

regard for its true welfare. Such things will continue as long as the evolution of nature and mind goes on. The tearing teeth give way to the persuasive tongue and the skilful pen; the bare fist and the stone-weapon are replaced by gun and rifle, and these in their turn may give place to the votes of an international congress. But in every case those who succumb must suffer, though the pain may be transferred almost entirely from the physical to the mental sphere. Individuals or races are evermore acquiring a predominant intellectual influence over others, and a two-fold suffering is the natural result. The exercise of power is repressed in the superior few by the multitude of inferiors, while these find it troublesome and dangerous. Thus both sides are supplied with motives for a struggle, which is none the less a real struggle for existence, because its objects are ideas. The sympathy and benevolence referred to by Mr. Sully (p. 387) cannot and will not prevent this struggle; at the best they will only serve to heal the wounds which it has caused. All that humanity joined to prudence can do, is to alleviate and limit existing evils; and it is only when benevolence has ceased, because there is no sphere for its activity, that we can say that a positive step has been taken towards general happiness. According to Hartmann, the action even of the best form of government is but of a negative character. Mr. Sully, on his side, would credit the state of the future with unlimited powers, including even the checking of over-population. Now many states have indeed tried to restrain pauperism by putting obstacles in the way of matrimony, but the result has always been the same—the multiplication of illegitimate births and prostitution. Or, if men should become so prudent as to restrain their sexual impulses from a regard to their own comfort, and from pity for the generations to come, then the process of training for such wisdom would certainly be a severe one, and what would be gained in ease from family cares would be dearly paid for by the pain resulting from the suppression of instinct. While, if the very instinct of generation could by a “scientific mind” be supposed eradicated, who can appreciate the effect upon the relation of the sexes—a relation from whose soil have sprung the most venomous thorns but also the sweetest blossoms of happiness, and which has supplied the most stirring motives to human activity?

No doubt, knowledge is expanding in all directions, and with the increase of knowledge of nature there is an increase of our power over it. But hitherto all positive increase of general wealth has had the character of a robbing of nature, and a time will come when the productiveness of the whole earth can no more be increased. Nevertheless, pessimists do not deny that

increase of knowledge, directly as well as indirectly, tends to lessen and even remove many evils, and Hartmann, in particular, joins with his pessimism a political and social optimism that seems quite beyond the comprehension of Mr. Sully. It is generally admitted that epidemics may be prevented, or, where they already exist, may be confined within narrower limits by a more rational sanitary policy and improved medical art, while many diseases may be made wholly to disappear by proper physical training and the discovery of new remedies. Yet as long as the doom of death lasts, sickness and infirmity with its attendant sufferings will go before. Hartmann does not question the progress of the medical art, but only doubts whether it can keep up with the rapid increase of the more complex nervous diseases, and of that sensibility which causes slight disturbances of the normal functions to be more acutely felt than were greater disturbances in the earlier stages of man's existence, in consequence of the finer nervous organisation which is the condition of higher intelligence.

The future will doubtless heal many wounds which now seem incurable. Even the social question will some day find a solution, though no one dare say whether it will be by gentle or by violent means. But the great sources of suffering will still abide in the future, for the reason that they spring from the very conditions of life. In fact, just in proportion as the different evils arising from passing social and political conditions are found to vanish, will the fact become more and more evident that life itself is the worst foe of happiness. Even if Mr. Sully had succeeded in proving that in the far-off future those existences that we call happy will become the majority, the fundamental idea of pessimism would still be far from being refuted. Should it be the doom of organic creation to perish by a general refrigeration, surely the sum total of pain arising from the pressure of more and more unfavourable climatic conditions on the animal and vegetable kingdoms would be infinitely greater than during the period of improving conditions; for with every backward movement a developed consciousness would have to be repressed. And, even if the cooling of our globe were to cease at the stage most favourable to human life and progress, the existence of a happy race during an indefinite future would tell against pessimism only on the supposition that the happy humanity of the future and the suffering humanity of the past and the present are one and the same. This is the idea involved in the 'panlogism' or 'panthelism' of Hartmann, but has no place of right in the materialistic automatism and will-dualism of Mr. Sully. If there is no absolute unconscious spirit as the entity common to all the separate conscious minds,

the distant future is absolutely nothing to me of the present ; it is only what I myself suffer or enjoy that can incline me to pessimism or optimism. After me may come the deluge or the millenium, but it is a matter of indifference to me, if my Ego is a mere cerebral phenomenon, the product of an aggregation of mere material atoms.

We will not follow Mr. Sully in his inquiry into the internal and external sources of pessimism and the causes of its rapid dissemination, but only note that he has too intelligent and keen an eye for natural, political and social shortcomings to throw himself unreservedly into the arms of optimism. He considers that, according to the side from which they are regarded, the facts may land us either in optimism or pessimism. In this we agree with him, but not when he goes on to say that the main source of pessimism is an abnormal sensitiveness to pain, and that pessimism itself is to be regarded in a large measure as a pathological phenomenon, which will cease to exist when the medical science of the future shall succeed in overcoming the peculiarities of temperament in which it is rooted (p. 444). With certain limitations this may be true in cases of unreasoned pessimism—*Weltschmerz*, but not of philosophical pessimism, which, uninfluenced by subjective feelings, rests exclusively on objective observation, and counts individual sensation as an object among other objects. Whatever can in this way be alleged against pessimism, can with equal force be alleged against optimism, and there is no reason why defects of temperament should be easier to eliminate in the one case than in the other. Nor is the attempt to hold the balance between optimism and pessimism that most worthy of "the man of philosophic mind" (p. 463) ; it should rather be to find the synthesis of both. To the eye of cool reason the world seems as good as possible because it is a real logical process ; in the eudaemonistic point of view, it is worse than no world, because the path whereon the *logos* strides from victory to victory is a path of suffering to the creature.

So far as the "how" and the "what" of the world is concerned, Mr. Sully's own "meliorism" does not differ from Hartmann's social and political optimism ; but if meliorism includes the hope that the future will justify the fact that a world exists, it merely illustrates what Hartmann calls "the third stage of illusion".

We may finally remark, in thus closing our long criticism of a "criticism," that it is not because they have to pay high taxes, or to do military service for their country, nor yet from any humiliating consciousness of the superiority of French civilisation and luxury, that so many Germans confess to Hartmann's pessimism ;



but because a time of material prosperity and of fulfilment of national hopes and wishes is a fit time to show how small an influence a little more or a little less of luck in external conditions can have on the value of life. And, if we have succeeded in convincing some readers that German pessimism has not been quite annihilated by Mr. Sully, and that it might still be worth their while to study its true meaning in the works of Schopenhauer and Hartmann, our labour has not been in vain.

O. PLUMACHER.

NOTE.—It is impossible to explain such remarks as those which Mr. Sully has thought fit to make on Hartmann's style and method at pp. 454-7, except on the assumption that he has a rooted prejudice against the great German thinker. They could hardly have been penned if Hartmann's works had already (by translation) become generally known. In dealing with the opponents of Hartmann, his taste in the matter of style is somewhat less delicate, else he would hardly call the flat witticisms of J. C. Fischer "pleasantly satirical," and find the attack of a certain Dr. Stiebeling "rather effective" (p. 204). He does indeed speak of an anonymous work, *Das Unbewusste vom Standpunkt der Physiologie und Descendenztheorie* (1872), as "a much more thoughtful demonstration of the untenability of Hartmann's biological assumptions"; but he evidently little suspected what was to be revealed in a second edition (1877), that this work, whose truly scientific character was fully recognised in Germany, was the production of none other than Hartmann himself! Hartmann has thus given unmistakable proof of being no mere layman in natural science; and, in particular, he has shown that it was from no ignorance of what the mechanical principle of Darwinism is able to explain that he felt himself bound to reject it in part, and to declare the necessity of adopting instead a spiritualistic teleological principle, to which the other is but as means to end.

## VI.—PHILOSOPHY IN THE UNITED STATES.

THERE are nearly 300 non-Catholic colleges in the United States, most of them chartered by the legislatures of their respective states, and conferring the degree of A.B. upon their students at the end of a four years' course, and A.M. three years after graduation. In nearly all these institutions certain studies, æsthetical, logical, historical, most commonly ethical, most rarely psychological, are roughly classed as philosophy and taught during the last year almost invariably by the president. The methods of instruction and examination are so varied that it is impossible in the space at our disposal to report in detail upon the nature and value of the work done in these institutions. More than 200 of them are strictly denominational, and the instruction given in philosophy

is rudimentary and mediæval. More than 60 which in the annual catalogue claim to be non-sectarian are, if not pervaded with the spirit of some distinct religious party, yet strictly evangelical. Indeed there are less than half a dozen colleges or universities in the United States where metaphysical thought is entirely freed from reference to theological formulæ. Many teachers of philosophy have no training in their department save such as has been obtained in theological seminaries, and their pupils are made far more familiar with the points of difference in the theology of Parks, Fairchilds, Hodges and the like, than with Plato, Leibnitz or Kant. Many of these colleges were established by funds contributed during periods of religious awakening, and are now sustained with difficulty as denominational outposts by appeals from the pulpit and sectarian press. The nature of the philosophical instruction is determined by the convictions of constituencies and trustees, while professors are to a great extent without independence or initiative in matters of speculative thought. The philosophical character of some institutions is determined by the conditions attached to bequests. A few are under the personal and perhaps daily supervision of the founders themselves, who engage and discharge the members of their faculties as so many day-labourers, and who are likely to be religious enthusiasts or propagandists.

The traditional college-*régime* in the United States was designed to cultivate openness and flexibility of mind by introducing the student hastily to a great variety of studies, so that his own tastes and aptitudes might be consciously developed as guides to ulterior and more technical work. The method of philosophical indoctrination, in striking contrast to this, seeks to prevent the independent personal look at things, and to inoculate the mind with insidious orthodoxies which too often close it for ever to speculative interests. The great open questions of psychology and metaphysics are made to dwindle in number and importance as compared with matters of faith and conduct. Some of the professorlings of philosophy are disciples of disciples of Hopkins, Hickok, Wayland, Upham, Haven. Most have extended their philosophical horizon as far as Reid, Stewart, Hamilton. Many have read Mill's *Examination of Hamilton*, chapters of Herbert Spencer, lectures of Huxley and Tyndall, and epitomes of Kant, Berkeley, Hegel, and Hume. Others, fewer in number, have studied compendious histories of philosophy like Schwegler and Ueberweg, have read Mill's *Logic* and Taine, have dipped into Kant's *Critique*, and have themselves printed essays on Spencer, Leibnitz, Plato, &c., in religious periodicals, have perhaps published compilations on mental or moral science, and are able to aid the sale of small

editions of their works by introducing them into their own classes as text-books. Others, fewer yet, to be spoken of later, have had thorough training, and are doing valuable and original work. It is, in any case, plain that there is very small chance that a well-equipped student of philosophy in any of its departments will secure a position as a teacher of the subject. He may find a career as a writer, editor, or instructor in other branches, or he may bring his mind into some sort of platonising conformity with the milder forms of orthodoxy and teach a philosophy with reservations. That most of the instructors find the limitation of their field of work galling is by no means asserted or implied. Many of them feel no need of a larger and freer intellectual atmosphere. They have never been taught to reason save from dogmatic or scriptural data. Where little science is taught there is a certain dignity attached to their department above all the others, which is as unfavourable to their own advancement as it is to the spirit of persistent inquiry on the part of the students. Summary and original methods of dealing with speculative questions are far more commonly found than philosophical erudition or careful criticism. Yet there is an almost universal complacency in the degree of liberality attained which is in strange and indeed irrational contrast to the feeling with which a philosophy which is entirely emancipated from the theological yoke is regarded. Andover is well pleased to be thought freer from the rigidity of dogma than Princeton, and Oberlin claims more warmth of feeling and less tyranny of creed than either. While slight differences among the philosophical *idola* of orthodoxy are thus disproportionately magnified, all these institutions unite in impressing upon their students the lesson that there is an abyss of scepticism and materialism into which, as the greatest of all intellectual disasters, those who cease to believe in the Scriptures as interpreted according to the canons of orthodox criticism, are sure to be plunged.

The spirit and aims of philosophical instruction in very many of the smaller colleges have found an admirable exponent in the Boston Monday lectureship of the Rev. Joseph Cook, whose discourses, now published in several volumes, have had an immense influence upon the semi-theological philosophy of all such centres of learning as we have just characterised. In these forty-minute lectures before immense popular audiences, art, literary criticism, politics, religious history, science and systems of thought are discussed with much display of erudition and with great similitude of candour. Long lists of names and title-pages are read, succinct and often epigrammatic summaries of philosophical and religious systems and tendencies are given; recent discoveries in science are explained or illustrated by

diagrams and by illuminated microscopic preparations, until the hearers are convinced that, by a short and easy method now first displayed, the very kernel of truth has been shelled from books and nature by a master-hand. Then, with much liberality of interpretation, scriptural doctrines are compared with these results, all in a conciliatory spirit: but wherever the teachings of science or philosophy are judged to vary from those of Scripture, the supreme authority of the latter is urged with all that intensity of a fervid and magnetic personality which makes dogmatism impressive and often even sublime. The mere brute force of unreasoned individual conviction, which Hegel so wittily characterises as the animal kingdom of mind, has a peculiar convincing eloquence of its own in religious matters, which, acceptable as it often is to faith, has long been one of the stumbling-blocks in the way of philosophy in America.

Another reason for the backward condition of philosophy in most of these institutions is found in their poverty. A few of them were established by real-estate companies to help the sale of land. By the negligence of the more worthy members of trustee-boards, together with mistaken provisions to fill vacancies, others have fallen under the control of ward-politicians, and professorships are retained or declared vacant by a scarcely better than popular suffrage. Still others are under the immediate control of state-legislatures, which have it in their power to reduce or even to withhold the annual appropriation. Nearly all of them are poorly endowed, and some are entirely without funds save those accruing from tuition-fees; and thus, so numerous are they, so sharp is the competition for patronage, and so quick and sagacious is parental jealousy of any instruction which shall unsettle early and home-bred religious convictions, that it is not surprising that there is little philosophical or even intellectual independence to be found in these institutions. Again the faculty or *corps* of professors generally consists of from three to ten men, or occasionally ladies, who must instruct in mathematics, natural and physical science, ancient and two or three modern languages, political and literary history, oratory, theme-writing, &c., and who are thus obliged to spend from three to six hours per day in the class-room. Thus fatigue, coupled with the dissipation of teaching miscellaneous subjects, generally renders original thought and research impossible even where otherwise it might have led to valuable results.

While thus business conspires with Bethel to bring mental science into general disfavour, the average American college is in no position to lead or even to resist popular opinion and sentiment, supposing it inclined to do so. The shrewd practical money-making man, even in one of the learned profes-

sions, can make little use of philosophy; indeed it is liable to weaken his executive powers and make him introspective and theoretical. The popular philistinism which we have heard impressed as a weighty philosophical motto in the exhortation, "Look outward not inward, forward not backward, and keep at work," and which seems no more rational than the superstitious aversion to science in the Middle Ages, has been strangely efficacious against philosophical endeavour here. Hence all branches of mental science have come to be widely regarded as the special appanage of a theological curriculum, where despite the limitations above described a little speculation is a trifle less dangerous than for a practical business man.

The above, however, we hasten to say, is the darker side of the picture and is truer in general of Western than of Eastern colleges. The most vigorous and original philosophical instruction is almost everywhere given in ethics, though like nearly all other subjects it is taught from text-books. Those most commonly used are Alexander's *Moral Philosophy*, Hopkins's *Law of Love and Love as a Law*, Wayland's and Fairchild's *Moral Science*. Calderwood's and Peabody's treatises have lately been introduced into three of the larger institutions. Portions of Cicero's *De Officiis* we also find in three catalogues as part of the required course in ethics. The work with text-books is commonly supplemented by lectures where ethical principles are applied to law, trade, art, conduct, &c., in a more or less hortatory manner. The grounds of moral obligation are commonly deduced from Revelation, supplemented by the intuitions of conscience, which are variously interpreted. The practical questions of daily life are often discussed in the class-room with the professor with great freedom, detail and interest. Current social or political topics are sometimes introduced, and formal debates by students appointed beforehand by the professor, and followed by his comments, may occasionally take the place of regular recitations and lectures. In one large institution each member of the class in ethics is required to write a thesis during the senior year, to be read before the class on one of such topics as the following, which we copy from a printed list:—"Is it right to do evil that good may come?" "Is falsehood ever justifiable, and if so, when?" "The moral character of Hamlet." "My favourite virtues and why?" "How far is Plato's Republic truly moral?" "Discussion of the conflict of duties, e.g., in Jephthah, Orestes." "The Utilitarianism of J. S. Mill." "How far may patriotism justify the motto, *My country right or wrong*." "The moral difficulties in the way of civil service reform." That the subjects thus attempted are far too vast and general for thorough discussion by the students who essay them

cannot be denied, but it is possible that definite and permanent centres of interest in the infinite questions of ethics may often be thus established in the most immature minds. On the whole the average student completes his course in moral science with the conviction that there is a hard and fast line between certain definite acts and habits which are always and everywhere wrong, and others which are right; that above all motives, circumstances, insights, the absolute imperative of conscience must determine the content as well as the form of actions. The psychological nature and origin of conscience are questions which have excited very little interest.

The theory of the syllogism is taught in nearly all the colleges from elementary text-books, of which Fowler's *Deductive Logic* and Jevons's smaller treatise, which have lately come into quite general use, are the best. As a rule but little time is devoted to work in this department, and the methods of induction are often entirely ignored.

Mental philosophy is usually taught during perhaps half the senior year from such text-books as Bowen's abridgement of Hamilton's *Metaphysics*; *The Human Intellect*, by President Porter of Yale College, which has been epitomised in a smaller volume; Haven's, Upham's and Wayland's *Mental Philosophy*; Everett's *Science of Thought*; Hickok's *Rational and Empirical Psychology*. Schwegler's *Outline of the History of Philosophy*, of which Seeley's translation is far superior to that of Stirling, is coming into use in the larger institutions. Locke's *Essay*, portions of Berkeley, of Kant's *Critique of Pure Reason*, and even Mill, Hamilton, Spencer's *Psychology*, Bain, and Taine, are also occasionally introduced.

Æsthetics, so called, is taught in many colleges from various text-books, such as Day, Bascom, Kames's *Elements of Criticism*, and compendiums of art-history. An immense range of topics, from landscape-gardening and household-furniture to painting, poetry, and even music, are summarily treated, and more or less arbitrary psychological principles are laid down as fundamental canons of taste. The work done in this department we regard as not merely worthless, but as positively harmful. No attempt is made to explain the ulterior causes or the nature of feelings of pleasure and pain; and without museums, galleries, or even photographs, little can be learned of the history or principles of art.

Butler's *Analogy*, Natural Theology, the Evidence: of Christianity, Pedagogics, and the Catechism, are taught in a few institutions as a part of the philosophical discipline. The question of the order in which the above studies should be pursued, was lately brought forward in a general convention of

college officers, but has attracted little attention. In at least four of the larger theological seminaries, courses of lectures on the history of philosophical speculation are given by the professor of systematic divinity. In very many of the higher schools and colleges for female education, especially if they are under evangelical control, instruction is given in mental science. In the annual catalogues of the very smallest and poorest of these colleges, we have seen one teacher dubbed professor of mental, moral and physical science, and in another of natural and intellectual philosophy. Literature, history, mathematics, and more often political economy, may be found as part of the work of the instructor in philosophy.

The serious and introspective frame of mind which religious freedom and especially pietism tends to develop; the enterprise and individuality which are characteristic of American life, and which have shown themselves in all sorts of independent speculation; the principle of self-government, which in the absence of historical precedents and tradition inclines men to seek for the first principles of political and ethical science, have combined to invest semi-philosophical themes with great interest even for men of defective education. From the pulpit and even in the adult Sunday-school class or the debating society, in the club-essay and the religious press, metaphysical discussions are often heard or read, and not infrequently awaken the liveliest discussions. Yet, on the other hand, dogmatism and the practical spirit have combined thus far quite too effectually to restrain those who might otherwise have devoted themselves to the vocation of thinking deeply, fearlessly and freely on the ultimate questions of life and conduct. If "philosophers in America are as rare as snakes in Norway," it is because the country is yet too young. The minds of business and working men, whether sceptical or orthodox, have short, plain, and rigid methods of dealing with matters of pure reason or of faith, and are not always tolerant of those who adopt other and more 'unsettling' ones. If, however, we may find in Hegel's *Phenomenology* a program of the future, the hard common sense which subdues nature and organises the objective world into conformity with man's physical needs will, at length, when it has done its work, pause in retrospect, and finally be reflected as conscious self-knowledge which is the beginning of philosophical wisdom. As a nation we are not old enough to develop, and yet too curious and receptive to despair of, a philosophy.

As we pass either from the smaller to the larger or from the Western to the Eastern institutions, we find in general a much better condition of things. The older Edwards, the influence of whose writings is still very great upon the religious philosophy



of New England and the Middle States, did much to rationalise Calvinism and to inspire confidence in the verdicts of reason. In his great work on the freedom of the Will, he taught that the essence of right and wrong lies in the nature of acts and motives and not in their cause, that spontaneity and not self-determination is the characteristic of a free act. Subjectively, virtue is the love of being in general. Adam's sin was not imputed to his descendants, but its effects were naturally transmitted as the withdrawal of higher spiritual influences. The new birth is not the advent of a new but the new activity of an old principle. The disciples of Edwards—Dr. Dwight, C. G. Finney, E. A. Parks, Horace Bushnell, Moses Stuart, and many others—have modified and widely extended his opinions.

Deserving of special mention are Mark Hopkins and L. L. Hickok. The latter, lately professor of philosophy in Union College, N.Y., has written text-books entitled *Rational Psychology*, *Moral Science*, *Empirical Psychology*, *Rational Cosmology*, *Creator and Creation*, &c., some of which are made the basis of instruction in Amherst College. On the ground of a modified Kantianism he attempts to reconcile an original interpretation of post-Kantian idealism with orthodox theology. His subtle mysticism has found many admirers. Mark Hopkins, long president of Williams College, though laying claim to no great scholarship even in his own department, brings with singular independence and individuality the skill of nearly half a century of paedagogic experience, and a most impressive force and sweetness of character, to enforce in a direct Socratic way the lesson that philanthropy is the substance of both religion and morals. His influence, not only on many generations of students, but wherever his lectures and text-books have been read, has been considerable.

At Yale College, philosophy is taught mainly by President Porter on the basis of his compendious text-book above named, but with auxiliary lectures, books of reference, &c. Although a clergyman of the congregationalist denomination, he has devoted a life of study largely to philosophy, and is a vigorous expositor of the Scotch-Kantian speculation as opposed to Darwinism and materialism.<sup>1</sup>

The influence of W. E. Canning, Theodore Parker, R. W. Emerson, and the considerable body of Unitarian writers, has been most wholesome in stimulating and liberalising speculative thought, especially at Harvard University where the most

<sup>1</sup> Dr. Porter has also published a brief historical sketch of philosophy in the United States, with an exhaustive bibliography, in Ueberweg's *History of Philosophy* (translated by Professor G. S. Morris of Michigan University) Vol. II., pp. 422, ff.

extended course of philosophic study is now offered. The amount of work *required* of all students is much less than at Yale, and instead of the topical method, by which sensation, representation, reason, &c., are followed separately through ancient and modern systems, the historical method is adopted. Jevons's *Logic* and Locke's *Essay*, each two hours per week, are prescribed for all students during the junior year. But in addition to this, five optional courses are offered in the last annual catalogue as follows: (1) Cartesianism, Descartes, Malebranche, Berkeley, Hume; (2) Spinoza, Leibnitz and Kant, Bouillier's *Histoire de la philosophie Cartésienne*, Kant's *Critique of Pure Reason*, Schwegler's *History of Modern Philosophy*, Lectures on French and German Philosophy; (3) German Philosophy of the present day—Schopenhauer's *Die Welt als Wille und Vorstellung*, Hartmann's *Philosophie des Unbewussten*; (4) Psychology—Taine *On Intelligence*, Recitations and Lectures; (5) Ethics—Grote's *Treatise on the Moral Ideals*, Cicero's *De Officiis*, Lectures. Each of these courses occupies three hours per week through the year, and all, especially the first two, are largely attended. The fourth course has been organised only two years, and is conducted by the assistant-professor of physiology. It was admitted not without some opposition into the department of philosophy, and is up to the present time the only course in the country where students can be made familiar with the methods and results of recent German researches in physiological psychology: the philosophical stand-point of Dr. James is essentially that of the modified new-Kantianism of Renouvier. Professor Bowen, who has been for many years at the head of the philosophical department, has recently published his lectures on the History of Modern Philosophy in the form of a text-book, a review of which has already appeared in *MIND*. He is a very lucid expositor, especially of Kant and Schopenhauer, and a vigorous antagonist of materialism and infidelity: his philosophical stand-point is essentially theistic and his method eclectic. Assistant-professor Palmer, who has for some years taught the first course, and more recently Kant's *Critique*, is purely objective, impersonal and historical in his expositions, which are remarkably acute and thorough. Professor C. C. Everett, of the theological department, lectures on the history of German philosophy from a modified Hegelian stand-point. How independent and original his interpretations have been may best be seen in his *Science of Thought*. John Fiske, formerly lecturer on philosophy in the university, and widely known by his *Outlines of Cosmic Philosophy* as the American expositor of Herbert Spencer, was the first to elaborate the doctrine that the development of sympathy and philanthropy

was due to the prolongation of the period of human infancy. Following Mr. Spencer's sociological researches, he has more recently turned his attention to historical subjects. Chauncy Wright, whose philosophical papers have lately been edited by Professor Norton, was a man of great philosophical acumen, whose untimely death was most unfortunate for philosophy in Cambridge. It is impossible, even after a careful study of his writings, either to epitomise his views or to account for his influence upon those who came in contact with him. The latter was no doubt largely due to the uniform sweetness of his disposition, to his unusual powers of ready conversational exposition and illustration, and to the extent and variety of his mental acquisitions. His most considerable essay, on the "Origin of Self-Consciousness," unfolds the view that when a subjective sequence of mental terms or states can be held along with, though distinct from, an objective sequence, involving thus at least four terms in all, self-consciousness may be first said to exist. How this comes to pass and how thence the higher faculties are developed, is unfolded with most characteristic analytic subtlety. With an almost Coleridgean power of abstract ratiocination, favoured by his mathematical profession, he combined the tastes of a student of nature. His correspondence with Mr. Darwin, more lately printed among his letters, shows how carefully he had pondered the details of the theory of natural selection, the expression of emotion, &c. It can scarcely be doubted, however, by those who attempt to shell out the kernel of his speculations, that vagueness and even ambiguity most seriously impair the value of his work. Finally, no account of philosophy in Cambridge would be complete which failed to mention the name of J. E. Cabot, a member of the visiting board of the University in philosophy, and widely known for the extent of his learning and the breadth of his sympathies and opinions.

President Le Conte of the University of California, most favourably known for his acute contributions to the phenomena and theory of binocular vision, has for some years instructed his classes from the text-books of Bain, Spencer, Carpenter, &c. It is also hoped that the new University of Baltimore will soon establish a chair of physiological psychology and another of the history of philosophy. A special professorship of the former department is more or less definitely contemplated by several of the larger institutions.

Outside of schools and colleges, philosophical interests have taken on the whole a wide range. Trendelenburg, Schleiermacher, Krause, Schelling, Fichte, Herbart and Lotze have all found more or less careful students and even disciples among

men of partial leisure in the various professions, who have spent the last year or two of student-life in Germany. Above all these, however, stand first the influence of Hegel, which since 1867 has been represented by the quarterly *Journal of Speculative Philosophy*, edited by Wm. T. Harris of St. Louis, and secondly that of Herbert Spencer and other English evolutionists, which has been greatly extended by the *Popular Science Monthly*, edited by Dr. E. L. Youmans of New York. Mr. Harris is a pronounced Hegelian, adopting in the main the interpretation of Rosenkranz. As superintendent of the public schools of his city, he has had but little time for original contributions to his *Journal*, but all English students who wish to understand Hegel's *Logic*, particularly the third part, should not fail to read Mr. Harris's compendious articles as part of the necessary propaedeutic. He has gathered about him a circle of young men who have been led by his influence to interest themselves in German speculations, and whose contributions are found in nearly every number of the *Journal*. Unfortunately it has never quite paid its expenses, and the editor himself has year after year made up the deficit from his own purse. Yet the quality of the original articles has steadily improved, and the influence of the *Journal* seems on the whole to be increasing in the country. From the first a large portion of each number has been given to translations from Greek, French, and especially German philosophers. Important chapters of Fichte, Kant, Trendelenburg, Rosenkranz, and especially of Hegel's *Aesthetics*, *Phenomenology*, *Logic*, &c., have appeared here for the first time in English. Many convenient epitomes of more extended works by the above and other writers have also been published. The editor has from the first carefully studied the bearings of philosophical speculation upon methods of education, and the high character of the schools under his care and the wide interest felt among teachers in his annual reports, bear witness to the discretion with which abstract principles have been utilised as practical suggestions. German paedagogical methods have also been introduced to the notice of teachers in the pages of the *Journal*. Among its earlier more prominent contributors Mr. Kroeger has lately turned his attention to translating Fichte, Mr. Schneider to Shakespearian criticism, and Mr. Davidson to Aristotle, whose *Metaphysica* he is now translating with new interpretations in Athens.

The appearance of such a journal in America, and above all in a great centre of western trade, supported by enthusiastic self-trained thinkers who had the hardihood to attempt to translate into Anglo-Saxon the ponderous nomenclature of the absolute idealism of the *Wissenschaftslehre* and the Hegelian

*Logic*, has been often spoken of as surprising and even anomalous. The explanation, however, may not be far to seek. There is perhaps no spot in America where during the last quarter of a century illustrations of the powers of the human mind over nature have been so numerous and so impressive as in St. Louis. In a city so young and so large, the geographical and commercial centre between west, east, and south, the inference that in a more than poetic sense thought is creative and man is the maker of the world, is not merely congenial, but to a certain degree spontaneous and irresistible. Again there is such a pleasing sense of liberty in the perpetual recurrence of dialectic alternatives, and yet of security, inspired by the regularity with which the beats and clicks of the triadic engine are heard, and above all there is such a largeness and scope in the formula of Hegel, as if the Universe itself might be 'done' once for all by reading a few thousand pages, that it is no wonder his sun should rise upon the new as it sets in the old world. Where every thing is an open question it is pleasing to feel that "all progress is advancement in the consciousness of freedom". But this is not all. No one can spend a week among the philosophical coteries of St. Louis without feeling—still more perhaps than by reading the *Journal*—that these causes, aided by the influences of reaction from a severely practical and business life, have awakened the faculty of philosophy to a most hopeful and inquiring receptivity. There seems scarcely a doubt that, should Mr. Harris decide to open his *Journal* to psychological as well as to metaphysical discussions, and in preference to the aesthetical selections which have been so often weary and unprofitable, it would soon become not only self-supporting but remunerative.

One of the most acute of the so-called "right wing" Hegelians is Professor Howison of the Massachusetts Technological School in Boston. His course of lectures on the history of philosophy is extended and thorough, though attended largely by ladies. He has lately delivered a course of public lectures in the Lowell Institute on the Logic of Grammar mainly in the spirit of Aristotle and Trendelenburg.

In Germany it is said that Hegelianism has been an excellent *Vorfrucht* to prepare the philosophical soil for the theories of evolution. It limbers and exercises without fevering the mind, making a safe and easy transition from the orthodox to the scientific stand-point. Even its adversaries often admit that as a mental discipline at a certain stage of philosophical culture it is unsurpassed. However this may be, it is certain that the theories of Herbert Spencer, G. H. Lewes and other English evolutionists, which have exerted such an immense influence in

the United States during the last decade, are not indebted to Hegelianism, but are represented almost entirely by scientific men not especially interested in the history of speculation. If the worst side of the American college is the philosophical, its best is the scientific department. The value and thoroughness of the work done here is probably too little appreciated abroad. While in some of the smaller colleges it is poor enough, in many others the professors have had a thorough European training and lack only leisure and library and laboratory opportunities for valuable and original work. With comparatively few exceptions, all the most competent teachers of natural or physical science either tacitly accept or openly advocate the fundamental principles of evolution. Even the most orthodox institutions are often no exceptions to this rule. One of the largest of these long and vainly sought for a professor of zoology who would consent to pledge himself beforehand to say nothing in favour of Darwinism. In eight or nine out of more than thirty of those institutions which the writer has visited, instructors in this department are allowed to teach the principles of Huxley and Haeckel, if they wish, unmolested. It must be said, however, that very often the adoption of the formulae of the development-theory is so premature as seriously to interfere with the patient mastery of scientific details, or, through the students' impatience with other methods, to lower the standard of work and attainment in other departments. In a country of such remarkably rapid development as our own, where the ploughboy is never allowed to forget that he may become a millionaire or even President if he wills it earnestly enough, the catchwords of evolution often excite an enthusiasm which is inversely as the power to comprehend its scope and importance. Many of the more semi-popular aspects of Herbert Spencer's philosophy have been admirably presented by Mr. John Fiske in courses of lectures in Harvard University, in Boston, New York, and in several of the Western cities. In the periodical, especially the religious, press, criticisms almost without number have been published. Professor Bowne of the new Boston University has elaborated his strictures of Herbert Spencer into a small volume which is one of the most subtle and forcible criticisms of the *First Principles* and the *Psychology* that have ever proceeded from an essentially evangelical standpoint.

About a year ago Mr. C. S. Peirce, assistant in the United States Coast Survey, began in the *Popular Science Monthly* a series of papers entitled "Illustrations of the Logic of Science," which is still progressing. The author is a distinguished mathematician, and this discussion, in which he long ago



interested himself, promises to be one of the most important of American contributions to philosophy. Thought, he premises, is excited by the irritation of doubt, and ceases when belief is attained. Feigned hesitancy, whether for amusement or otherwise, stimulates mental action. The production of belief is thus the sole function of thought. It involves moreover the establishment in our nature of a rule of action or a habit. Beliefs are distinguished by the different modes of action to which they give rise. There is no distinction of meaning so fine as to consist in anything but a possible difference of practice. Our idea of anything is our idea of its sensible effects. To attain the highest degree of clearness we must consider what effects that may have practical bearings we conceive the object of our concern to have. Our conception of these effects is then the whole of our conception of the object. In calling a thing hard, *e.g.*, we say that it will not be scratched by many substances. We may indeed say that all hard bodies remain soft till they are touched. There is no falsity in such a *mode of speech*. The question of what would occur under circumstances which do not actually arise is not a question of facts, but only of the most perspicuous arrangement of them. (*Cf. Helmholtz, Physiol. Optik*, ss. 431-443.) If we know the *effects* of force, we are acquainted with every fact which is implied in saying that force exists, and there is nothing more to know. All the effects of force may be correctly formulated under the rule for compounding accelerations. Processes of investigation, if pushed far enough, will give one certain solution for every question to which they can be applied. The general problem of Probabilities, which is simply the problem of Logic, is from a given state of facts to determine the universal probability of a possible fact. The probability of a mode of argument is the proportion of cases in which it carries truth with it. But it springs from an inference which is repeated indefinitely. The number of probable inferences which a man draws in his whole life is a finite one, and he cannot be certain that the mean result will accord with probabilities at all. A gambler, an insurance company, a civilisation, although the value of their expectations at any given moment, according to the doctrine of chance, is large, are yet sure to break down at some time. The fact of death makes the number of our risks and impressions finite, and therefore their mean result uncertain. Yet the idea of probability assumes that this number is indefinitely great. Hence Mr. Peirce infers that logicity inexorably requires that our interests should not be limited. They must not stop at our fate but must embrace the community. Logic is thus rooted in the social principle. He who would not sacrifice his own soul to save the world is



illogical in all his impressions collectively. Interest in an indefinite community, recognition of the possibility of this interest being made supreme, and hope in the unlimited continuance of intellectual activity are the indispensable requirements of Logic. After laying down three fundamental rules for the calculation of chances, which are all he is willing to recognise, and deducing from his definition of the probability of a consequence rules for the addition and multiplication of probabilities, he comes to the discussion of what Mr. Venn distinguishes as the conceptualistic in opposition to the materialistic view. The former, as expounded by De Morgan, regards probability as the degree of belief which ought to attach to a proposition; while, according to the latter, it is the proportion of times in which an occurrence of one kind is *in fact* accompanied by an occurrence of another kind. He concludes that the conceptualistic view though answering well enough in some cases is quite inadequate. The problem proposed by the conceptualists he understands to be this:—Given a synthetic conclusion; required to know out of all possible states of things how many will accord to any assigned extent with this conclusion. This he regards as only an absurd attempt to reduce synthetic to analytic reason, and believes that no definite solution is possible. As all knowledge comes from synthetic inference which can by no means be reduced to deduction, it is inferred that all human certainty consists merely in our knowing that the processes by which our knowledge has been derived are such as must generally lead to true conclusions. In discussing the order of nature, Mr. Peirce concludes that although this universe ought to be presumed too vast to have any character, yet the spirit of science is hostile to any religion except one like that of M. Vacherot, who worships a supreme and perfect ideal whose non-existence he finds as essential to the conception of it as Descartes found its existence to be. Any plurality of objects have some character in common which is peculiar to them and not shared by anything else. A chance-world is simply the actual world as it would look to a polyp at the vanishing point of intelligence. If we do not limit ourselves to such characters as have *for us* importance, interest or obviousness, then any pair of objects resemble one another in just as many particulars as any other pair. The division of synthetic inferences into induction and hypothesis, the discussion of Mill's doctrine of the uniformity of nature, and of the assumption of De Morgan's Formal Logic, are very suggestive and interesting; but we have no space for further quotations and must refer the reader to the original papers.

Perhaps the most general characteristic of American intel-

lectual life is its heterogeneity. Not only has each religious sect or denomination its own revered and authoritative founders or reformers, its own newspapers and literature, and often its own set of duties and associations, beyond the limit of which the thoughts and interests of its more uneducated members rarely pass, but also many semi-philosophical sects have a more or less numerous representation. Swedenborgianism has many churches and expositors, the best of the latter being Mr. Parsons and Mr. Henry James, father of the well known novelist. The sort of life produced under the influence of this system is broadly sympathetic, charitable, intelligent, and in every way admirable. Its disciples in America have succeeded in making it in the best sense of the word a practical system. Again, the later speculations of Comte in the *Politique Positive* have found a number of admirers in New York and elsewhere. The voluminous works of S. P. Andrews best illustrate the incoherency and assumption of this rather insignificant coterie. What might be called its right wing contents itself with the discussion of revolutionary, social and economic theories, particularly of the relation of labour and capital, while its left shades off by insensible gradations into all the vagaries of spiritualism. The general sect of spiritualists is very large and has produced a vast and dismal body of literature. Most physiologists and psychologists are now convinced that here is one of the most interesting fields for scientific observation, such as will never be made by spiritualists themselves, but no serious study of the phenomena has as yet been attempted.

On the whole, in view of the intellectual conditions of the United States, it is not to be wondered at that minds of a philosophical cast are often found to be eclectic and perhaps hypercritical. Probably in no other country is a man of high culture tempted by so many and varied considerations to criticise or instruct rather than to add to the sum of the the world's intellectual possessions by doing original work.

The influence of German modes of thought in America is very great and is probably increasing: Du Bois Reymond observed in a public address some years ago that no two countries could learn so much from each other. Scores of American students may be found in nearly all the larger German universities. Most of even the smaller colleges have one or two professors who have spent from one to three or four years in study in that country, whose very language is a philosophical discipline. The market for German books in the United States is in several departments of learning larger than in Germany itself, though this is partly, of course, to be accounted for by the number of German residents. The Hegelianism of St. Louis was not only

first imported but has always been to some extent supported by native Germans.

It has been urged that a nation, like ours, which inherits a ready-made language and a rich literature which it has not itself developed, is apt to be superficial in thought and shallow in sentiment. But it is surely forgotten that this is a heritage to which every generation is born. Besides, language knows no political or geographical distinction, and even the best literature is no longer national. And may we not, at least, modestly claim that enough philosophical thinking has been done to show that we are not behind in power of mental assimilation?

Protestantism in America has its well-developed grammar of dissent, and has been in the past an invaluable philosophical discipline. The American, perhaps, even more than the English, Sunday might almost be called a philosophical institution. A day of rest, of family life and introspection, it not only gives seriousness and poise to character and brings the saving fore-, after-, and over-thought into the midst of a hurrying objective and material life, to which its wider sympathies and interests and new activities are a wholesome alternative, but it teaches self-control, self-knowledge, self-respect, as the highest results of every intellectual motive and aspiration. In its most developed forms, especially among the Unitarians, Protestantism has more or less completely rationalised not only the dogmas of theology but their scriptural data, and now inculcates mainly the practical lessons of personal morality and the duty of discriminative intellectual, political and æsthetical activity.

Finally we shall venture to call patriotism a philosophical sentiment in America. It is very deeply rooted and persistent even in those who take the most gloomy view of the present aspect of our political life, who insist that the Constitution needs careful and radical revision, and who are not disposed to overrate the magnitude of events in our national history thus far. It is philanthropic, full of faith in human nature and in the future. And if, according to a leading canon of the new psychology, the active part of our nature is the essential element in cognition and all possible truth is practical, then may we not rationally hope that even those materialisms of faith and of business which we now deplore, are yet laying the foundations for a maturity of philosophical insight deep enough at some time to intellectualise and thus harmonise all the diverse strands in our national life?

G. STANLEY HALL.

## VII.—NOTES AND DISCUSSIONS.

### THE ESTABLISHMENT OF ETHICAL FIRST PRINCIPLES.

I cannot but think that the readers of ethical treatises—the remark applies to Utilitarian and Intuitionist moralists alike—must often be perplexed by the manner in which their authors deal with the propositions which they present as first principles. They begin by declaring that first principles are, as such, incapable of proof, and then immediately proceed to make what at least an untutored mind can hardly distinguish from an attempt to prove them. The apparent inconsistency is indeed easy to explain; for all, or almost all, *soi-disant* ethical first principles are denied to be such by at least respectable minorities; hence we naturally expect our moralist not merely to propound his first principles, but also somehow to provide us with rational inducements for accepting them. Still, the dilemma in which he is placed is a somewhat serious one, and seems to me to deserve more systematic examination than it has yet received. On the one hand, it seems undeniable that first principles cannot stand in need of what is strictly to be called proof: they would obviously cease to be first principles if they were exhibited as dependent for their certainty on the acceptance by the mind of certain other truths. Yet, on the other hand, when we are dealing with any subject where there is a conflict of opinion as to first principles, we can hardly refuse to give reasons for taking our side in the conflict: as rational beings conversing with other rationals it seems absurd that we should not be able to explain to each other why we accept one first principle rather than another. And how can these reasons be valid if they do not prove the first principle which they (to use Mill's phrase) "determine the mind" to accept?

To find a way out of this difficulty we require, I think, to take Aristotle's distinction between logical or natural priority in cognition and priority in the knowledge of any particular mind. We are thus enabled to see that a proposition may be self-evident, *i.e.*, may be properly cognisable without being viewed in connexion with any other propositions; though in order that its truth may be apparent to some particular mind, there is still required some rational process connecting it with propositions previously accepted by that mind.

For instance, I may begin by regarding some limited and qualified statement as self-evident, without seeing the truth of the simpler and wider proposition of which the former affirms a part; and yet, when I have been led to accept the latter, I may reasonably regard this as the real first principle, and not the former, of which the limitations and qualifications may then appear accidental and arbitrary. Thus, to take an illustration from the subject of Ethics, with which I am here primarily concerned, I may begin by laying down as a principle that "all pain of human or rational beings is to be avoided"; and then afterwards may be led to enunciate the wider rule that "all pain is to be avoided"; it being made evident to me that the difference of

rationality between two species of sentient beings is no ground for establishing a fundamental ethical distinction between their respective pains. In this case I shall ultimately regard the wider rule as the principle, and the narrower as a deduction from it; in spite of my having been led by a process of reasoning from the latter to the former. Or again (as I have elsewhere argued)<sup>1</sup> I may start with the egoistic maxim that "it is reasonable for me to take my own greatest happiness as the ultimate end of my conduct"; and then may yield to the argument that the happiness of any other individual, equally capable and deserving of happiness, must be no less worth aiming at than my own; and thus may come to accept the utilitarian maxim that "happiness generally is to be sought" as the real first principle; considering the egoistic maxim to be only true in so far as it is a partial and subordinate expression of this latter.

This then is one species of the rational process that we are considering; by which we are logically led to a conclusion which yet when reached we regard as a first principle. We start with a proposition which appears self-evident; we reflect on it and analyse it into a more general proposition with a limitation; concentrating our attention on the limitation, we see that it is arbitrary and without foundation in reason; we deny its validity and substitute for our original principle the wider statement of which that affirmed a part.

There is another quite different process by which a similar result may possibly be reached. We may be able to establish some general criteria for distinguishing true first principles (whether ethical or non-ethical) from false ones; and may then construct a strictly logical deduction by which, applying their general criteria to the special case of ethics, we establish the true first principles of this latter subject. How far such a methodological deduction is actually in our power, I will presently consider. At any rate, I should maintain that there is no third way of establishing ethical principles. The premisses of our reasoning, when strictly stated, must, if not methodological, be purely ethical: that is, they must contain, implicitly or explicitly, the elementary notion signified by the term "ought"; otherwise, there is no rational transition possible to a proposition that does affirm "what ought to be". It may be true that in the development of human minds judgments of the former kind are found among the antecedents of the latter; e.g., a man may be actually led by contemplating purely physical facts to enunciate a moral law; but I know no way of exhibiting this process as logically cogent, and consequently valid for all minds.

This point will, I think, be easily admitted when it is considered in this abstract way; but I find it frequently ignored in current ethical arguments. E.g., many writers seem to hold with Mill<sup>2</sup> that the psychological generalisation that all men desire pleasure can be used to establish the ethical proposition that pleasure is what we ought to aim at. In Mill's argument the paralogism is partly concealed by the

<sup>1</sup> Cf. *Methods of Ethics*, III. c. 13 and IV. c. 2.

<sup>2</sup> Cf. *Utilitarianism*, c. 4.

ambiguity of the word "desirable"; for if by "desirable" we merely mean what *can* be desired, the inference that pleasure is desirable because it is actually desired is obviously both irresistible and insignificant. But if we are seeking (as Mill is) for an ethical principle, from which practical rules may be deduced and which therefore must contain implicitly the notion "ought," I cannot see how we are logically to reach such a principle through the most extensive observation of what men actually desire. And the same may be said of all attempts to construct an ethical system on a basis of physical fact; or on the basis of any other kind of psychical facts except ethical beliefs. We may affirm *à priori* that there must be a gap in all such reasonings—where the notion "ought" is introduced—which does not admit of being logically bridged over.

Let us now examine the question above-reserved; *viz.*, whether it is possible to state any general characteristics by which true first principles may be distinguished from false ones; besides, that is, the characteristic of being self-evident to the mind that contemplates them. Such criteria would certainly be useful, if they can be found: since the history of thought makes it only too clear that the human mind, philosophic and unphilosophic, is liable to affirm as self-evidently true what is afterwards agreed to be false. No doubt the Cartesian condition of "clearly and distinctly conceiving" whatever we affirm to be self-evident affords a partial protection against such errors; by carefully conforming to it we may often avoid mistaking mere habitual assumptions, or beliefs inadvertently accepted on authority, for intuitive truths. But though this precaution is a valuable one, it is certainly not adequate: as an inspection of the first principles of Cartesian physics will sufficiently show. It is therefore important to examine what Reid and others have to offer in the way of further criteria. Of these there seem to be chiefly two which have obtained a wide currency and on which considerable stress has been laid by thinkers of more than one school; *viz.*, (1) Universality (or approximate universality) of acceptance,—“consent of learned and unlearned,” and (2) Originality, as inferred from the early date at which certain beliefs make their appearance in any particular mind. I propose to consider each of these separately.

First, however, I would observe that it makes a fundamental difference whether these or any similar criteria are used as supplementary to the characteristic of apparent self-evidence, or as substitutes for it. It seems to me a cardinal defect of Reid's philosophy that he leaves this difference in the back-ground, and does not always make it clear from which of the two points of view he is arguing. Regarded in the former light, I should quite admit the importance of the criterion of "consent," the logical value to any individual mind of the agreement with other minds in any given intuition. It may be thought, perhaps, that so long as any proposition presents itself as self-evident, we can feel no need of anything more, though we may afterwards come to regard it as false: since self-evidence, *ex vi termini*, leaves no room for any doubt that a supplementary criterion

could remove. But this view does not sufficiently allow for the complexity of our intellectual processes. If we have once learnt, either from personal experience or from the history of human thought, that we are liable to be mistaken in the affirmation of apparently self-evident propositions, we may surely retain this general conviction of our fallibility along with the special impression of the self-evidence of any proposition which we may be contemplating; and thus, however strong this latter impression may be, we shall still admit our need of some further protection against the possible failure of our faculty of intuition. Such a further guarantee we may reasonably find in "general consent"; for though the protection thus given is not perfect—since there are historical examples of untrue propositions generally accepted as self-evident—it at least excludes all such error as arises from the special weaknesses and biases of individual minds, or of particular sections of the human race. A proposition which presents itself to my mind as self-evident, and is in harmony with all the rest of my intuitions relating to the same subject, and is also ascertained to be accepted by all other minds that have been led to contemplate it, may after all turn out to be false: but it seems to have as high a degree of certainty as I can hope to attain under the existing conditions of human thought.

The case is very different when the argument from "consent" is used not to confirm but to override my individual judgment as to the self-evidence of any proposition. Even so it may afford a sufficient ground for a practical decision: certainly if I found myself alone *contra mundum*, I should think it more probable that I was wrong than that the world was, and such a balance of probability is enough to act on: but I could not treat the proposition in question as sufficiently known for purposes of scientific reasoning. For the argument establishing it would equally establish the defective condition of the individual intellect that failed to see its truth: and would therefore afford a general probability of error in any exercise of that intellect on the subject to which the proposition related.

Let us pass to consider the second of the above-mentioned criteria, Originality. It seems to me that the stress laid on this by Reid and other writers is chiefly due to a psychological assumption now almost exploded; *viz.*, that the human mind exists at birth in a condition which, though imperfect, in so far as undeveloped, is at least free from positive faults: in which, therefore, the exercise of its cognitive faculties, so far as it is capable of exercising them, must result in truth. It is hardly necessary at the present day to point out how entirely this assumption lacks scientific foundation: since not only is this original uncorrupted state of the human intellect nowhere given in experience, but we do not find any approximation to it as we trace back the history of any individual man, or of the human race generally, to its sources. Indeed there probably remain but few thinkers who conceive themselves in a position to urge the ascertained originality of any belief as positive evidence of its truth. There seem, however, to be still some who would apply the criterion negatively;



holding that if we can explain the derivation of an apparently self-evident belief, we thereby show its apparent self-evidence to be illusory. This view I propose briefly to consider.

The supposed explanation must consist in stating either (1) the physical or (2) the psychical conditions of the mental phenomenon which is said to be derived. Now on the physiological question I speak with all diffidence: but I believe that physiologists have no such knowledge of the bodily conditions under which true and false beliefs respectively are produced, as could possibly justify us in invalidating an apparently self-evident proposition on physiological grounds; except in the case of mental derangement revealed by physical symptoms, or of beliefs that are normally received through the operation of the organs of sense. A clairvoyant may have reason to distrust his visions because they come with his eyes closed; but I am aware of no similar grounds for discrediting ethical intuitions.

It will seem then that the explanation that is to invalidate the self-evidence of an apparent intuition must be psychological. Now it is universally held, by English psychologists at least, that we know Mind only as a series of transient phenomena—except so far as we are allowed to know the permanence, identity, and free causality of the subject of these phenomena; a point which does not now concern us. At any rate the psychological “derivation” of any belief or other mental phenomenon can be at most an account of the transient psychical facts—whether beliefs or merely feelings—which experience shows to be invariable antecedents of the phenomenon explained. We have no ground for supposing these antecedents really to persist in their consequent under a changed form, when they have apparently passed away. It is necessary to lay stress on this, because several writers of the Associational school assume the right of transferring chemical conceptions to psychical change; and regard mental phenomena as “compounded” of their antecedents just as a piece of matter is conceived to be composed of its chemical elements. I have never seen any justification for this procedure. Certainly the analogy of material chemistry fails to justify it. When the coexistence of the two antecedents oxygen and hydrogen is followed by the appearance of the heterogeneous matter called water, we have two distinct reasons for conceiving the oxygen and hydrogen to have a latent existence in the water; first that the weight of the water exactly corresponds to the weight of the oxygen and the hydrogen, and secondly that we can reverse the process of change and exhibit the water as the immediate antecedent of the oxygen and hydrogen. But neither of these reasons exist—nor any other that I am aware of—for attributing more compositeness to any mental phenomenon than we can discern in it by direct introspective analysis.

If then it be admitted that the so-called “explanation” of an apparent intuition can only consist in a statement of its antecedents, not its elements, we have to ask in what way such a statement can affect the question of its truth or falsehood. Some writers really seem to think that the mere fact of a belief having been caused is a ground

for distrusting it, unless we can show that its causes have been such as to make it true. But this doctrine lands us at once in universal scepticism; since the premisses of any such demonstration must be beliefs, which having been caused will themselves require to be proved true. Unless indeed it is held that the ultimate premisses of all reasoning are uncaused!—a paradox which I have no ground for attributing to the writers in question. Otherwise if all beliefs are equally in the position of having had invariable antecedents, it is obvious that this characteristic alone cannot serve to invalidate any of them.

If therefore an apparently self-evident proposition is to be discredited on account of its derivation, it must be not merely because, as a psychical phenomenon, it is the consequent of certain antecedents, but because it can be shown from experience that these particular antecedents are more likely to produce a false belief than a true one. I am far from denying that such a demonstration is possible in the case of some propositions that have been put forward as self-evident ethical principles: but I do not remember to have ever seen it systematically attempted.

HENRY SIDGWICK.

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MR. BALFOUR ON TRANSCENDENTALISM.

I should like to say a few words about Mr. Balfour's paper on "Transcendentalism," which appeared in *MIND* XII. Mr. Balfour is a vigorous critic, but I do not think he is sufficiently familiar with Kant, or with any mode of thought which can, in Kant's sense, be called 'transcendental,' to make his criticism in this case very effective. I shall not therefore follow him through all the questions he discusses, but confine myself to a few leading points.

(1) Mr. Balfour's main stumbling-block is Kant's expression, '*Musskönnen*' (must be capable), and, like Schopenhauer, he thinks that the second word takes away all the force of the first. If it cannot be said that the object of knowledge *must* be thought as object to a conscious subject, but only that it must be *capable of* being so thought, this, he thinks, destroys the whole transcendental argument. "The rules which thought was supposed to impress on nature, according to which nature must be, because without them she would be nothing to us as thinking beings, these rules turn out after all to be of only subjective validity. They are the casual necessities of our reflective moments, necessities which would have been unmeaning to us in our childhood, of which the mass of mankind are never conscious, and from which we are absolved during a large portion of our lives" (*MIND*, XII, p. 489). Will Mr. Balfour carry out this argument to its legitimate consequences? Logicians tell us that a conclusive argument *must be capable of* being stated in logical form, and shown to be in accordance with logical laws. Will Mr. Balfour then maintain *either* that every one who reasons correctly knows these laws

as the scientific logician knows them, or that these laws are "of subjective validity," "the casual necessities of our reflective moments"? Again, not only Kant, but Hamilton, Mill, Spencer, and indeed almost every modern writer on the theory of knowledge, maintains that we know things only in their relation to each other. Yet the very emphasis with which they think it necessary to insist on this fact, if there were nothing else, would be sufficient to show that it is a fact hidden from the ordinary consciousness of men. On the contrary, to that consciousness things seem to be known in themselves and apart from all relations, till such 'transcendental' writers show that it is *not* so. Now will Mr. Balfour say that the doctrine of the relativity of the objects of knowledge is merely "of subjective validity"?

(2) But Mr. Balfour tries to fortify his argument by saying that Idealists, of all men in the world, as they hold that the *esse* of things is their *intelligi*, *ought* to hold that there is nothing in the thought of the individual of which he is not conscious (p. 487). Now, Idealism is based on the truth that the only intelligible meaning of objectivity or existence, is objectivity for a *thinking subject*, and that of an object external to thought we can say nothing. But this no more implies that the individual subject must have brought to consciousness all that is involved in his knowledge of objects, than it implies that every individual subject must be omniscient. The truth is that Mr. Balfour has never realised the difference between the so-called Idealism of Berkeley and the Idealism of Kant. This is manifest from the whole course of his paper, and particularly from some of his criticisms on Kant's 'Refutation of Idealism'. Thus (p. 498) Mr. Balfour says: "The real question is this—Does being in space and outside the body imply that the extended and external object is outside of mind, and other than one of the series of conscious states?" And then he proceeds to accuse Kant of a confusion between the idea of externality to consciousness, and the idea of externality in the sense of existence *in space* (which, it may be remarked in passing, Kant has expressly and clearly distinguished, *Kritik*, ed. Rosenk, p. 299), because he only attempts to show that the explicit consciousness of the external object in the latter sense is prior to the explicit consciousness of the self as an object, and does *not* attempt to show that there is an existence of things in themselves independent of consciousness. But if Mr. Balfour had understood what Transcendentalism implies, he would have seen that its effect is to make the latter problem meaningless, and to substitute the former for it. (Cf. Mr. Green's article in *Contemporary Review*, Dec., 1877, p. 30.) No doubt there is an occasional uncertainty in Kant's language, especially in the first edition of the *Kritik*, for which I have elsewhere tried to account (*Phil. of Kant*, pp. 545, 621, &c.).

(3) Closely connected with this is another misunderstanding. Mr. Balfour begins his article by questioning Kant's own account of the 'Transcendental Logic' as having to do with the explanation of the fact of knowledge and not with the proof that knowledge is possible: or, as being, in Mr. Green's words, 'a theory of the process which without

theory we already perform'. This, Mr. Balfour thinks, is "misleading if not incorrect," for "Transcendentalism does attempt to establish a creed". Mr. Balfour, in short, finds it difficult to see how Kant's criticism should lead to any important theoretical conclusions, if it merely explains an assumed fact. But this difficulty arises from an insufficient appreciation of the result of such an enquiry into the nature of knowledge. The laws of Logic are reached simply by bringing to clear consciousness, or, in Kant's words, "bringing to conceptions," the principles involved in our actual thinking and reasoning, yet, when thus made conscious, they enable us to correct its errors. An illogical reasoning may be shown to be inconsistent with itself, because inconsistent with the principles upon which all reasoning depends. And if it be the fact, as Kant shows, that a self or 'combining consciousness' is implied in every determination of objects as such, it is to be expected that this fact, when brought to consciousness and reflected upon, will essentially modify our views as to the nature of these objects. It will have important bearings, *e.g.*, upon the possibility of a materialistic explanation of the world.

(4) As Mr. Balfour has thus misunderstood the nature of the transcendental method, it seems scarcely necessary to follow him in his criticisms of special points in Kant. Some of these criticisms indeed have been anticipated by those who have adopted Kant's method, but who have attempted to carry out the application of it more consistently than Kant himself; others imply the same misconceptions which have been already referred to. I may point out, however, that before any one can do justice to Kant's deductions of Substance and Causality, he must put himself at Kant's point of view; in other words, he must consider these deductions in the light of what has preceded them, especially of the 'Deduction of the Categories,' and the 'Schematism of the Conceptions of the Understanding'. The order of Kant's thought leads him to show: *first*, that objects as such cannot be given in sense; *secondly*, that, therefore, their determination as objects is by acts of mental synthesis, for which the forms or rules are supplied by thought itself, so that objectivity is the same thing as conformity to general rules of synthesis, or, as Kant expresses it, "objective validity and necessary universality are equivalent conceptions"; and *thirdly*, that these rules are the pure conceptions of the understanding, which, however, as applied to the matter of sense, are schematised in relation to time. Thus, *e.g.*, the purely logical relation of Reason and Consequent is schematised as Causality, *i.e.*, as Succession of one event after another, according to a universal rule. Now, it is quite useless to attempt to criticise the 'Analogies of Experience' without reference to these previous steps. For want of such reference, Mr. Balfour actually (p. 502) criticises Kant as having overlooked the very distinction upon which his argument rests—the distinction between mere succession and succession *according to a universal rule*.

I shall add one word of explanation. The aim of Kant in the *Kritik* is to prove that the mere particulars of sense cannot be made objects of

knowledge except as determined by the universal (*cf. Phil. of Kant*, p. 267). In the 'Æsthetic' he shows that the present time and place (the 'here' and 'now') can be known as such only in relation to other times and places, and therefore as parts of one time and of one space. In the 'Analytic' he goes on in the same spirit to show that this determination of times and places in relation to each other and to the unity of time and of space, is itself impossible except through synthetic acts of thought whereby *phenomena* are determined in relation to each other and to the unity of experience. Of these acts, the principal are those which Kant calls the 'Analogies of Experience'. The defect of Kant's statement, as I have tried to show (*Phil. of Kant*, pp. 460-62) is that he separates the principles of Substance, Causality and Reciprocity too absolutely from each other, and hence seems to encourage the notion that the substance of things is a mere identity underlying difference, and that the transition from cause to effect is a mere movement from one phenomenon to another quite different from it. But for such errors we find the corrective in Kant himself, as, *e.g.*, where he tells us that the substance of phenomena lies in their permanent relations to each other (*Kritik*, pp. 231-2; *Metaph. Anfangsgründe*, *passim*). Kant indeed finds such permanent relations only in external experience, but on this point I have said enough elsewhere (*Phil. of Kant*, pp. 474 ff.).

(5) In conclusion I would observe that Mr. Balfour also is 'among the prophets' of Transcendentalism. For (p. 493) he admits that "change is unthinkable except for what Mr. Green calls a 'combining' and, therefore, to some extent, a persisting consciousness"; and he admits further that some "recognisable permanence through change" is necessary "to make change in time intelligible by contrast," though he says at the same time that "*the smallest recognisable permanence* is enough". It is *such* a little one! How can Mr. Balfour be allowed at once to use, and to repudiate, the transcendental method? And in reference to the above admissions, how will he deal with his own dilemma? Will he venture to affirm *either* that the persisting consciousness, of which he speaks, is only a "casual necessity of his reflective moments," *or*, on the other hand, that every one who is conscious of a permanent object must also have explicit consciousness of a persistent self?

EDWARD CAIRD.

(1) The whole value of Mr. Caird's first criticism depends on a confusion between performing an act and formulating the fact of its performance. I neither assert nor dispute the proposition that all knowledge is relative. But if it be true, I readily admit that it is not the less true because it is not a truth recognised by the mass of mankind. This admission, however, in no way weakens the force of my criticism on the transcendental method, for my contention is that, in many of the cases of so-called transcendental necessity, the relation under which we are told an object has to be thought before it can be anything to a thinking being, is one under which by the majority of mankind it is *not* thought. I do not say that the majority of mankind never formulate the fact of their so thinking it: I say that as a

matter of fact they do not so think it: and I say so on the authority of Mr. Caird himself in *Phil. of Kant*, p. 396—"Kant is here examining what elements are involved in knowledge, and therefore does not need to consider how far the clear consciousness of them is developed in the individual, nor indeed whether the individual ever actually develops that consciousness at all".

Mr. Caird will be able to quote against me Mill and Hamilton (authorities, by the way, for whom I entertain no especial respect) when he can show that they held the doctrine of the relativity of knowledge and at the same time believed that certain individuals never had a consciousness of the things related.

(2) I should like to see Mr. Caird's second objection more fully developed. If, as the first sentence in the paragraph would seem to show, he attributes to me the opinion that all facts of thought are facts of consciousness, I acknowledge it to be mine. If, as the third sentence suggests, he supposes me to hold that we are conscious of all that is involved in any judgment we may happen to make respecting objects, I need hardly say that such an opinion is *not* mine.

With regard to the latter part of the paragraph he is in error in supposing me to confuse the Idealism of Berkeley and of Kant; though it is true that I think the practice of applying (as Mr. Caird and Mr. Green habitually do) the term to the philosophy of the latter rather than to that of the former, is not one to be commended.

(3) It will be sufficient to say, in answer to the third criticism, that the opinion I intended to express, and to which Mr. Caird appears to take exception, was this—that transcendental writers occasionally speak as if the accuracy of ordinary mathematical and physical knowledge was to be assumed as true irrespective of philosophy. I merely wished to guard the reader against supposing that this way of speaking represents the real opinion of the philosophers who use it.

(4) The fourth criticism consists generally in an accusation of ignorance respecting the true teaching of the 'Transcendental Analytic'. There is no special reply to be made to it, except this—that an ignorance which has proved impenetrable to all the explanations of Mr. Caird's work is hardly likely to be enlightened by two paragraphs.

(5) The fifth criticism depends on a complete misconception on Mr. Caird's part as to the nature of my attack on Transcendentalism. This consists of two distinct arguments. The first attempts to show that there are great difficulties (to say the least) in founding a creed upon 'transcendental necessities'; the second attempts to show that in certain cases no 'transcendental necessity' exists of the kind required by Kant. I never dreamt of denying that to each one of us there are relations which are involved in objects, and which on reflection we cannot make abstraction of without rendering the object "nothing to us as thinking beings". But

(1) I see great difficulties in resting a philosophical system on these necessary relations even when they exist, and (2) I think they do not exist in all the cases in which the transcendentalists profess to find them. It is the *second* point I was attempting to establish in the passage which Mr. Caird appears to think amounts to an admission of the principle on which rests the validity of the transcendental method.

ARTHUR JAMES BALFOUR.

## THE NUMBER OF TERMS IN A SYLLOGISM.

I CANNOT but think that a slight misunderstanding underlies some of Mr. Venn's strictures, in MIND XII., upon my *Essay on the Theory of Logic*. In that essay, Logic is regarded as a science of matter-of-fact, quite distinct from a psychological investigation of the reasoning process. Yet Mr. Venn begins the most dissentient portion of his article by speaking of "the part of Mr. Read's essay in which he discusses the nature of syllogistic reasoning". The passage referred to, however, does not discuss syllogistic reasoning, but "explores the actual correlations of phenomena" formulated in syllogism (p. 240). The mistake arose partly, no doubt, from the defects of my exposition; but partly, too, I cannot help thinking, from associations with the usual treatment of Logic. For it is difficult to agree with Mr. Venn that Mill, for instance, whilst departing from the matter-of-fact standpoint in his definition, preserves it "with great consistency throughout nearly all the discussions in his volumes". Such consistent inconsistency would make the definition not, as Mill says, "a correct description of the subject" of his volumes, but wholly irrelevant to them: and I have not found Mill's mind so "essentially illogical" (as Prof. Jevons has it).

The question is, How many Terms has a Syllogism? Now everybody knows that if by Terms we mean names, or concepts, or classes, a Syllogism has three Terms. But recently it has become usual with a certain class of thinkers, whose disciple I would be, to understand by the terms of a Syllogism, attributes or groups of attributes. Mill found that a Syllogism comprised three such terms; Mr. Spencer assigns it four; and in the above-mentioned essay of mine it is suggested (not that the Syllogism comprises, but) that it may be best represented as comprising five terms. To illustrate this I take a common example: Men are mortal; Greeks are men;  $\therefore$  Greeks are mortal,—and examining this in the light of Mill's axiom of the Syllogism, observe that (to dispense with symbols) it might be written thus: Humanity coexists with mortality; Hellenicity with humanity;  $\therefore$  Hellenicity coexists with mortality.

Now to this statement I object that it "does not represent a relationship of classes at all" (I had previously been treating the Syllogism as a relationship of three classes); and upon this remark Mr. Venn observes that it seems to imply that Mill regarded a Syllogism as dealing primarily with the relations of classes, adding that this cannot be meant, as the contrary is too well known. And in fact two pages before (p. 238), I had plainly stated that the Terms whose relations Mill's axioms expressed were attributes. Since, however, it is impossible to mention attributes explicitly without implicit reference to classes, or classes explicitly without implicit reference to attributes, it seems to me that Mill exaggerated the importance of his distinction. And, if so, it is a fair objection to his axioms, as applied to the Syllogism, to say that they do not express a relationship of classes; for that is only another way of saying that they do not express a relationship of attributes in



the full extent of their prevalence. The mortality which is concomitant with the humanity which is concomitant with Hellenicity, is only the mortality of Greeks; according to Mill's axiom, none but dead Greeks bear witness to the mortality of the living: whereas when we say that Greeks are mortal because all men are, we mean that the mortality of Greeks is proved partly, and indeed chiefly, by the death of non-Hellenic men. Mr. Venn says quite truly that it would have strengthened my case to take the example of Socrates instead of Greeks. Individuals were probably excluded from my mind by its preoccupation with classes: the chapter is entitled "Of the Mediate Relationship of Classes"; and it seemed sufficient to deal with classes because, from what had been said elsewhere (*e.g.*, Ch. VII, § 5), the case of relationships between individuals and classes could occasion no difficulty. But for the particular purpose of showing the inapplicability of Mill's axioms to the Syllogism, a mediate subsumption of some individual would have been the best example. If whilst Socrates lives we argue: Socraticity coexists with humanity; Humanity with mortality; therefore Socraticity with mortality,—we either include more than three terms, or produce no evidence for our conclusion. For if the humanity which coexists with Socraticity be identical with that which is alleged to coexist with mortality, Socrates being still alive, there is no evidence of the coinherence of these attributes. To give such evidence we must find cases of the coexistence of mortality with some other humanity than that of Socrates; that is to say, we must have more than three terms, to wit: (1) the peculiarities of Socrates, (2) his human qualities, (3) his presumptive mortality, (4) the humanity, and (5) the mortality of other dead men. There are at least five terms: I say at least, because, strictly speaking, the particular human quality and mortality of each dead man are distinct terms; so that the number of them is incalculably great; but by the aid of words or other symbols we may conveniently collect and represent them as two—non-Socratic humanity and non-Socratic mortality.

After this criticism of Mill's view, I proceed to Mr. Spencer's, which turns out to be deficient in another way. A Syllogism in Mr. Spencer's view contains four terms, and two of these would be, in the above example, Hellenic humanity and Hellenic mortality, which Mill refused to distinguish from Mr. Spencer's other two, non-Hellenic humanity and non-Hellenic mortality: but Hellenicity, which (as I will presently show) Mill must have admitted, Mr. Spencer omits. Accordingly, I remark that "the differential nature of Greeks is here omitted," and I add—"wherein there may lurk something incompatible with mortality": but this last clause, however true, I now perceive to be irrelevant, and I beg to withdraw it. But, says Mr. Venn, what is Hellenicity? Nay, what does it matter? Is there such a class as Greeks? If so, there must be the attribute Hellenicity. Or if there is really no such class, but only a multitude of people who for various reasons are called Greeks, still the name may be regarded as a factitious attribute. At any rate, Mill must have

acknowledged Hellenicity as a term: for what example does he himself take (B. II., c. 2, § 3)—what but a Syllogism concerning mortals, men, and kings; whose conclusion, he says, may be read: "Wherever the attributes of kingship are found, that of mortality is found also"? There, plainly, kingship is regarded as a distinct term co-ordinate with humanity and mortality. But what, I may reasonably ask, is kingship? Or if kingship may be a term, why not Hellenicity?

But there is no reason why we should cling to such examples (though for the purposes of an abstract science they have some advantages): let us turn to Mr. Venn's example—the cruciferae and their wholesomeness. Some sailors, wrecked on an unknown shore, find a new species of the cruciferae, and believing that all cruciferae are wholesome proceed to eat this specimen. If the empirical law which connects crucifercity with wholesomeness holds true in this new case, we have a good example, as it seems to me, not of a Syllogism, but of what I have ventured to call a Quadrterminal Correlation (whose rule is formulated in Ch. IV., part 2, § 5), and more especially of the Doctrine of Kinds. But now suppose one of the sailors, whilst foraging, finds something which in some respects looks like a cabbage; only—a thing he has never witnessed or heard of before—it is in flower! This puzzles him: in so far as it is like the familiar cabbage it looks edible, but the flower gives him pause. He carries it to his mates: no one feels sure it is a cabbage, but one man has heard that all vegetables with a flower of that shape are wholesome; and thereupon they eat it. There now is a Syllogism with its five terms: (1) The attributes of a cabbage coexisting with (2) a peculiarly-shaped flower, and therefore inferred to coexist with (3) wholesomeness; because (4) all previous examples of such a flower have been found to coexist with (5) wholesomeness.

But let us return to the case in which a plant, immediately classed as cruciferous, is believed to be wholesome on the strength of the belief that all such plants are wholesome. How, according to Mr. Venn, would Mill bring this one under his axiom? He says: "We have observed that the attributes of the cruciferae are accompanied by wholesomeness:—there we have two terms. The new plants yield the third term. . . . All that we care to observe is the presence of the cruciferous attributes: the additional presence of other attributes as well, which serves to make a third term of it, does not really concern us." The statement of Mill's axiom which this agrees with is, "Whatever has a mark has that which it is a mark of". But it does not agree with the fuller statement of the axiom for Syllogisms of which both premisses are universal, namely, "Whatever is a mark of any mark, is a mark of that which this last is a mark of". Still less clearly does it agree with the other form of the axiom, "A thing which coexists with another thing, which other coexists with a third thing, itself coexists with that third thing". For observe, in the above quotation from Mr. Venn, in what way "the new plants yield the third term". It is not in so far as they are *like* former instances

of the cruciferae. Were it so, the case must come under some axiom such as Prof. Jevons's for the Substitution of Similars; an axiom which predicates a relation as implied in the combination not (as Mill's axiom requires) of two relations of coexistence, but of a relation of coexistence with a relation of likeness: the new plants are inferred to be wholesome because they are like others that were wholesome. But, according to Mr. Venn, the new plants yield the third term not by their crucifericity, but by their particular additions: it is really these "which serve to make a third term" of the new plants. Then indeed a relation of coexistence between those particular additions and wholesomeness is implied, in Mill's opinion (as his axiom requires), in a combination of two other relations of coexistence: but then the particular additions seem to "concern us," and then, too, any one can see that there are really five terms. For, says Mr. Venn, it is "easy to see where Mr. Spencer gets his *four* terms. The first two are the same as above [previously known specimens of the cruciferae accompanied by wholesomeness]. The third term [the new plant] becomes a third, not merely on account of the non-cruciferous additional attributes, but also because (as he maintains) the cruciferous attributes themselves are not the *same* as those which yield the induction expressed in the conjunction of the first two terms, but merely *like* them. The fourth term is the wholesomeness of the new plants . . . But where does Mr. Read get his *five* terms?" I take Mr. Spencer's four terms, and find a fifth in the non-cruciferous attributes of his third; which he does not indeed distinguish explicitly from the cruciferous attributes of the new plant, but which (as Mr. Venn says) "serve to make a third term of it" for Mill.

In my own poor "familiar example" the corresponding fifth term had a name, Hellenicity; but Mr. Venn can show that "with a new example we have not even the means whereby to express the corresponding distinction". This can be shown if the new example is suitably stated; but I am told that of cruciferae there are 1200 species, any one of which will, I suppose, furnish a name connoting certain differential qualities.

It will be seen from what has been said that the representation of the Syllogism as comprising five terms merely combines the views of Mill and Mr. Spencer. That is the whole mystery; and I cannot help thinking it must be perfectly transparent to any one who remembers that I treat of relations of phenomena, not of the process of reasoning. Reasoning proceeds, I conceive, according to the laws of association; and its steps, when checked and clearly and fully represented, appear, for the most part, as intuitions of Conjunct or Disjunct Relations, whose matter-of-fact correspondences are Triterminal or Quadraterminal Correlations. Still, it is my impression that compound and irresolvable intuitions not unfrequently occur, whose matter-of-fact correspondences are Quinquaterminal Correlations.

CARVETH READ.

## "MATTER-OF-FACT" LOGIC.

In his review of Mr. Carveth Read's *Essay on the Theory of Logic* in the last number of *MIND*, Mr. Venn alludes only briefly to the general view of the science taken by the author; and I should be glad to be allowed to offer a few remarks on this, especially in relation to what is said of the nature of Formal Logic.

Following Mr. Herbert Spencer, Mr. Read attempts to expound even Formal Logic as a purely objective Science. He accepts Mr. Spencer's definition of Logic as "a science that formulates the most general laws of correlation among existences considered as objective," with the proviso, however, that by "objective" we mean the phenomenal as opposed to the noumenal, and that we do not exclude the subject when it is itself regarded as a matter of fact. Of course the first question that arises, if this definition is to be accepted, is what we are to do with the contents of the old Scholastic Logic. Mr. Read divides it into four distinct portions, as including "the science of the use of language in Reasoning; the theory of Reasoning itself; occasional discussions in Metaphysics; and, expressly or by implication, some of the most general laws of the correlation of phenomena." Of these, the last alone is really logical; the Metaphysics must be relegated to Metaphysics; the theory of Reasoning to Psychology. The science of the use of language in Reasoning is more difficult to get rid of; it may, however, be handed over to Rhetoric, for "it is anomalous that there should be one science which treats of the use of language in discourse generally; whilst the use of language in a particular kind of discourse, and that the most important, is dealt with in another science". But this overlooks the fact that language fulfils more than one function, and that the office of language as an instrument of thought may be kept to some extent distinct from its office as an instrument of discourse. Mill has remarked that if there were but one rational being in the universe, that being might be a perfect logician; since, however, language of some kind is indispensable for thought if thought is to reach any degree of complexity, this solitary being would have to develop a language of some kind, and he might also develop a science of the use of language as the instrument of thought; but as he could not investigate the influence of language in discourse, in persuading and convincing men, he could not develop any art of Rhetoric. I can perceive no anomaly in having one science to treat of language purely in its relation to thought, and another to treat of it as a medium of intercourse between man and man. We may observe that though it may in general suit the purposes of Rhetoric to employ language logically, still this is by no means always the case, and that whilst the majority of men continue ready to be influenced by fallacious reasonings, Rhetoric will necessarily contain much that is essentially illogical.

The full extent of Mr. Read's innovation is seen when we find that "Logic has little or nothing to do with Fallacies," which are relegated partly to the Science of Education, though Rhetoric again comes in for

the lion's share. One might have thought that even from the matter-of-fact point of view Inductive Fallacies would have found a place in Logic; all fallacies, however, involve the subjective conditions which Mr. Read is so anxious to exclude. We may remark incidentally that all true knowledge involves subjective conditions also.

Let us turn, however, to that portion of the Scholastic Logic which Mr. Read is willing still to retain. In his last four chapters he treats of Immediate Inferences and the Syllogism, though under new and, at first sight, rather appalling names. Except that this novelty of expression is carried rather too far, giving an appearance of originality to the whole which is to some extent false, the treatment is in many respects admirable; but my purpose at present is to show that we are not really dealing here with laws of correlation among objects. Taking the propositions "All mammals are vertebrates," and "No invertebrates are mammals," from either one of which we can pass to the other by a process of immediate inference, it seems to me that as statements of objective fact we must regard them as precisely equivalent. No one can state this more strongly than Mill, who is himself a material logician; "the fact asserted in the conclusion" of an immediate inference, he maintains to be, "either the very same fact, or part of the fact, asserted in the original proposition". According to Mr. Read, however, the Principles of Consistency "represent certain aspects of the constancy of nature which are laws of Logic; were nature inconsistent (so to speak) we should be under no obligation not to be so; since inconsistent statements might then both be true." Now is Mr. Read here referring to noumena or to phenomena? We can perhaps understand what is meant by the supposition that the Principles of Consistency (that is, what we commonly call the Laws of Thought) might or might not apply to noumena (*i.e.*, on the hypothesis of the actual existence of noumena); but then Mr. Read has expressly excluded all consideration of noumena from his treatment of Logic. On the other hand we cannot talk of phenomena disobeying the Laws of Consistency, because they are laws under which the subject is compelled to know things, and on subjective grounds necessarily apply to phenomena. Leaving this difficulty on one side, however, we observe that, if nature were inconsistent in the sense supposed, knowledge would be impossible. We cannot think two contradictories true at the same time; and, if this were objectively possible, there could no longer be any correspondence between the external order of things and the internal order of thoughts. It may be replied that if it were objectively possible, it *would* also be subjectively possible. We are, however, dealing with the human mind as to-day constituted; and to-day the justification of the logical Laws of Consistency must be found, not in the consistency of nature, but in the impossibility of our mentally transgressing them. In short, we must come back to this, that to talk of the inconsistency of nature in the above sense is unmeaning. By the inconsistency of nature we can only properly mean the absence of uniformity in nature, and so far as this is the case an Inductive Logic is of course impossible. But what-

ever may have been the course of development of the human mind, the Principles of Consistency with which Formal Logic deals must now be regarded as conditions of knowledge depending, not on the objects themselves which are known, but on the minds knowing them; and they seem to be of special importance in relation to the expression of the knowledge in language. It is only when we recognise that the same objective correlation may be regarded from more than one subjective point of view, and may be expressed in different forms of language, and when we recognise the importance of making explicit what has been merely implicit, that these principles become of importance. To me it is utterly unmeaning to talk of the Axiom of the Syllogism as a law of correlation of objects—an objective law; regarded in this light, the Syllogism itself is an unblushing *petitio principii* in the most contemptible sense. Nothing can be more confusing than to speak, as Mr. Read does, of the Axiom of the Syllogism and the Law of Causation together as highest laws both resting upon constant and uncontradicted experience.

This leads me to one further criticism is conclusion. Regarding Logic as “a universal science formulating the most general laws of the correlation of phenomena,” we should certainly expect it to include some treatment of axioms, since whatever explanation may be given of their ultimate character, they are indubitably our most general laws. But Mr. Read excludes them entirely. Axioms are laws which are incapable of exact proof, and Logic does not deal with them, nor with any laws which are not capable of exact proof; it only treats of what follows from or is contained in axioms. All considerations of Probability and of Belief appear to be excluded, and Logic seems to become an exclusively deductive science. But I have not space to work out in detail all the difficulties in which Mr. Read involves himself. His attempt to remodel Logic on the basis indicated by Mr. Herbert Spencer was tempting, and he has probably done his work as well as it could be done; yet I cannot regard it as a marked success.

J. N. KEYNES.

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#### THEORETICAL AND PRACTICAL LOGIC.

Mr. Carveth Read's proposal (*Essay on the Theory of Logic*: Introd. sect. 5) to cede to Rhetoric the science of the use of Language in reasoning, is not dealt with by Mr. Venn in his criticism in the last number of MIND.

The grounds on which Mr. Read would make the cession, may be given in his own words—“For surely, it is anomalous that there should be one science which treats of the use of language in discourse generally; whilst the use of language in a particular kind of discourse, and that the most important, is dealt with in another science. If Logic deals with the use of language in reasoning, of what does Rhe-

toric treat? Is it conversant with the use of language in obfuscation? I fear it is commonly thought so."

But why should we not keep the name Rhetoric only for the science which treats of *pleasing and persuading* by means of language—persuading *whether to true or to false conclusions*? Why should we not give the duty of guarding reasoning (in its conscious and articulate shape) to Practical or Operative Logic, and let Rhetoric remain, as in fact it is commonly supposed to be, separate from Logic and supplementary to it when used in support of a true conclusion, separate and antagonistic when used in support of a fallacy? Mr. Read seems to attempt, as Mr. Venn says, "to lay aside more completely than is possible, the human or relative element in a system of Logic". Reasoning, so far as conscious, can take, amongst mankind, no other shape than language. As to the treatment of reasoning at all in Logic, may we not exclude the "account of the process," and still remember that the "formulating of the most general laws of correlation among existences" is done entirely *for the purpose* of cleansing the process of reasoning from the faults to which in the actual world it is liable?

Mr. Read says: "It is, no doubt, quite possible to commit Fallacies in expounding Logic, or in interpreting the exposition; but in the actual correlations of phenomena, in matter-of-fact, there can lurk no Fallacies". Is not the human element again somewhat forgotten? In matter-of-fact, seen in the only way that human beings can see it, there is surely room for Fallacy to lurk.

It almost seems as if Mr. Read, in his desire to prevent Logic from grovelling in machinery, rather forgets that, after all, its ultimate purpose is to be a machine. Why can we not treat, as he has done, its theoretical side, and still admit that its practical utility is the only thing that renders the theory important; that if in matter-of-fact (as known to men) there could lurk no Fallacies, there would be no need for a science of Logic at all?

*Petitio principii, ignoratio elenchi*, &c., are, no doubt, "tricks of the hustings" when they are Sophisms: but we can hardly keep our eyes shut to the fact that they are capable also of being Fallacies pure and simple, unintentionally and temporarily fallen into by the best reasoners in the world. That their study may *aid* the science of Rhetoric, is obvious, but only through Logic, and so far as Rhetoric is supplementary to that science: the effect of a careful study of Fallacies must necessarily be to counteract and disarm the Rhetoric which attempts to be illogical.

No one can doubt the value (for many purposes) of keeping, as Mr. Read has done, the Theory of Logic pure and abstract, but one does not see that his plan would suffer by admitting that the ultimate reason for it is that the Practice of Logic may be improved—that Fallacy may be successfully combated.

ALFRED SIDGWICK.



## MODERN NOMINALISM,

The Editor's friendly notice of the first part of my *Hume-Studien* in MIND XI. suggests to me some observations which may perhaps help to remove our points of difference.

I must begin by allowing that what the Editor calls "the apparent sharpness" of Mill's definition of Nominalism—that nothing is general but names—led me to attach more importance to it than perhaps its author would have thought of claiming; and I had already, before reading his criticism, become convinced that the definition is much too narrow. The Editor, on his side, however, seems not to have observed that in my essay I distinguished between *ancient* and *modern* Nominalism not only in point of time, but as opposed the one to Realism and the other to Conceptualism. A nominalist of the earlier type might very well also be a conceptualist, like William of Ockham or Locke; or he might take up no distinct position towards Conceptualism, as of no special concern to him, like Hobbes, whose express contention against general notions includes contradictory allowances regarding them (*e.g.*, *De Corpore*, Pt. I., ch. ii., § 14, *Human Nature*, ch. v., § 5). On the other hand, Nominalism of the later type maintains that universality is due to naming instead of abstraction, and this in opposition to Locke. The fact of the opposition to Locke made it impossible for me to place Hobbes at the head of Modern Nominalism. The importance ascribed to naming forced me to give Berkeley only an intermediate position.

As for the question of Hume's influence on later thinkers, the Editor hardly does me justice when he says that I note only a difference between M. Taine and Hume, for on p. 75 there is express reference to what they have in common. The community of their opinions led me also to assume an influence from Hume upon James Mill and Prof. Bain, since Hobbes stands much farther off, and there could be no doubt of their familiarity with Hume. Of course there can be no absolute proof of my assertion, but the like holds of most other such assertions in the history of philosophy, including the Editor's own counter-assertion; while this, if it points to an *exclusive* influence from Hobbes (whom I am otherwise little disposed to undervalue), can hardly be reconciled with the facts of the case. It is an interesting subject of inquiry, however; and not less so is the question of the somewhat uncertain relation of the modern Association-psychology to Hume—a question that can best be taken in hand by an English writer, not exposed like a foreigner to the danger of overlooking even the most obvious circumstances bearing upon it.

ALEXIUS MEINONG.

VIENNA, Nov. 1878.

## VIII.—CRITICAL NOTICES.

BACON'S *Novum Organum*, Edited with Introduction, Notes, &c., by  
THOMAS FOWLER, M.A., Professor of Logic in the University of  
Oxford, Fellow of Lincoln College. Oxford: Clarendon Press,  
1878.

There can hardly be any class of readers of the *Novum Organum* whose requirements will not be satisfied by this elaborately annotated edition. If the famous work has still an educational value, the learners who may be set to master its many difficulties could not desire a better key than Professor Fowler supplies; and so completely has the task been performed of tracing Bacon's wealth of allusions to their original sources, of giving cross-references to his other works, and of bringing the light of later philosophy and science to bear upon every one of his characteristic statements, that there is no other edition to which more advanced students or the general reader should henceforth more readily turn. If for these, indeed, Mr. Ellis's direction, in the collected edition of Bacon's works, may seem to have been already sufficient, the justification of Prof. Fowler's labours would have to be sought in his supplying the educational want; and it can hardly be said that he does make out a very strong case for placing the *Novum Organum* in the hands of logical tyros. Nobody, of course, can read the pithy wisdom of the First Book without profit; but to justify the prescription of the Second Book in a logical education, more is necessary than the assurance that, at least in some of the 'Praerogativae Instantiarum,' "many of the expressions employed still form part of our logical terminology," or that "it would be very difficult in many cases to describe more aptly and precisely than Bacon does the nature of the reasoning involved" (p. 131). The Second Book, I should say, has now an historical value only, and a general understanding of its terminology, in so far as this has passed into current philosophical usage, would seem to be the utmost that can profitably be required of the common run of students. It is possible, therefore, that not very many of this class will ever come under obligation to Prof. Fowler for the floods of light he throws upon the dark places they would find at every turn of their path.

For others the special interest of this edition lies in the seventeen sections of the Introduction (pp. 1—151). These are of a somewhat heterogeneous cast and not ordered according to any distinct principle, but they have the merit of bringing together nearly everything that needs to be known for the understanding of Bacon's place in the history of science and philosophy. Though it might not be difficult to add even to Prof. Fowler's extended list of testimonies to Bacon's influence or to cite still other anticipations of Bacon's conceptions than those that are here with so much care brought together, none could be adduced that would in the least alter the estimate to be drawn of Bacon's performance. Nor will the estimate

drawn by any dispassionate judge of the whole evidence differ materially (except in one particular) from Prof. Fowler's own. Without being in the least blind to Bacon's philosophic and scientific deficiencies, Prof. Fowler rests upon thoroughly solid grounds his claim to a high place in the roll of philosophic thinkers. "While Bacon (he says) undoubtedly did not possess any extensive or precise acquaintance with any single branch of science, and while, in some respects, his writings did not keep pace with the discoveries of the day, his range of vision covered an extraordinarily vast sweep of knowledge, and his scientific conceptions and the suggestions which from time to time he throws out, occasionally show a marvellous amount of sagacity and penetration." This is a sober strain compared with the indiscriminate panegyric that used to be heard, but the statement is perfectly warranted as against the not less indiscriminate depreciation of Bacon which of late years has become fashionable among scientific authorities.

It is when he treats or whenever he has occasion to touch on the question of Bacon's influence upon his successors that Prof. Fowler's footing becomes less certain. He would fain represent the influence as very considerable, but when he passes from general surmises to specific assertions his slenderness or absence of grounds becomes only too apparent. He does not indeed repeat the common error of Macaulay, Fischer, Rémusat and others, and imagine a profound influence from Bacon on his immediate successor, Hobbes, in the teeth of their complete difference of method and the younger thinker's absolute disregard of the elder. But if he finds any habit of thinking that may with some reason be called national, he must ascribe its origination to Bacon, however it may have been manifested by Englishmen as distinctly before as after him; and if philosophical inquiry in England has at a later time taken any marked directions, these must be supposed to have been indicated or opened up by Bacon, though hardly anything can be shown to have been farther from the thought of the great Instaurator. Thus Prof. Fowler refers to the habit of making sharp separation of Religion and Science, Faith and Reason, and this, though not (as he himself notes) peculiar to English thinkers, has undoubtedly been very marked in the greatest of them from Bacon onwards; but, however the fact may be explained—by national character or otherwise—the habit is certainly not less pronounced in thinkers of English name in a far earlier time and quite other circumstances, for example, in William of Ockham. As regards specific doctrines, one or two of Prof. Fowler's points may be a little more particularly noticed.

He supposes that Bacon's notion of a lower soul in man, shared by the brutes and materially generated, "may not unnaturally have contributed to the formation of materialistic hypotheses as to the formation of the soul in general among his successors, with whom the two-fold division disappeared". The facts by no means bear out this supposition. Hobbes, if Hobbes is meant, came by his materialism not through any process of dropping part of the earlier conception of

separate souls, but through being so overmastered by the idea of the new (or revived) mechanical philosophy as to ignore the subjectivity of mind in his eagerness to express all experienced change in terms of motion. Locke's speculations, too, as to whether it might not have pleased the Deity to "superadd to matter a faculty of thinking," such as he had analysed it phenomenally, are obviously not less alien from the ancient metaphysical doctrine in Bacon's or any other version. In truth, after Bacon, it was not only the distinction of lower and higher souls that disappeared, but (by the growth partly of physical and partly of psychological science) the whole of that earlier way of thinking, which Bacon himself had been content to pass on.

Take next Prof. Fowler's remark, on occasion of Bacon's enumeration of mental faculties and naïve statement of their mutual relations, that "the sharp line of demarcation drawn here and in similar passages between the office of the so-called faculties was a common feature of the philosophy of the seventeenth and eighteenth centuries, and has only been replaced in comparatively recent times by a more just appreciation of the complexity of our various mental operations and of the number of elements which go to make up some even of those psychical acts which at first sight appear the simplest". Here it is not expressly stated that the English psychologists in these centuries were led by Bacon to divide the mind into 'faculties'; but if it had been remembered that it was precisely the English psychologists, beginning with Hobbes in the very generation after Bacon, who first took up the ground they have always since maintained against the 'faculty'-hypothesis, there could hardly have been a stronger proof given that Bacon exercised no influence at all upon the most characteristically English movement within modern mental philosophy—the continuous pursuit of psychological inquiry in the spirit of positive science. When, therefore, after particularising some others of Bacon's antiquated psychological notions, Prof. Fowler proceeds to say that "it is impossible not to see in these speculations, crude as some of them are, the beginnings of much of the later English psychology which became so famous in the hands of Locke, Hume, Reid, and others," one can only express surprise that he should be able to see it, at least as regards Locke and Hume.<sup>1</sup> As for the anticipations which Prof. Fowler thinks he finds in Bacon of later ethical ideas, it is perhaps sufficient to note his own admission that Bacon "nowhere expressly discusses the fundamental question of Morals, such as the grounds of Moral Obligation or the nature of the Moral Faculty,"—in short, attempts neither of the characteristic tasks that English thinkers have set before them in the one other department

<sup>1</sup> The case is different with Reid, who was a strenuous upholder—in British psychology the reviver—of the 'faculty'-hypothesis; and Reid, we know, had an unbounded veneration for Bacon. It is not indeed necessary to suppose that he borrowed from Bacon in this particular. Still it is significant that his view of the mind's 'faculties' or 'powers,' however elaborately worked out, is almost as naïve and unscientific as Bacon's own.

of mental philosophy, besides psychology, which they have specially cultivated.

Altogether, it can by no means be maintained that Bacon's greatness lay in his definite anticipation of coming achievements in science or philosophy. Science and philosophy, it is not too much to say, would be to all intents and purposes exactly where they are, though he had never been or never written; and there are other names in Bacon's century of which it would be rash so to speak. Does Bacon therefore fall out of the first rank of philosophical thinkers? That is a question of a rather vain description, which different people will answer differently; but the most strenuous of his depreciators will find it hard to name another thinker of the second class who can be compared with him for breadth of view. As a *preacher* in a time of intellectual uprising, he has never had an equal.

EDITOR.

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*Histoire de la Philosophie en Angleterre depuis Bacon jusqu'à Locke.*  
Par CHARLES DE RÉMUSAT. Paris: Didier et Cie, 1875.

The author of this work was a profound student and a friendly critic of the philosophic literature of our island. His essay on Reid and his monograph on Bacon are widely known and appreciated. He himself was an independent member of the modern spiritualistic school of his country, and may be said to have occupied a place somewhere between Hamilton and Cousin. In relation therefore to the school which is usually considered peculiarly English, he is such a critic as the wise would wish to have—an opponent and likely to see our faults, but far enough away from our domestic quarrels to be unprejudiced, and sufficiently assured of his own ground to feel it safe to be generous. He rates the empirical philosophy less highly perhaps than its native adherents, but more highly than its native adversaries.

The salient feature of M. de Rémusat's *Philosophie en Angleterre* is the extent to which it treats of writers who, in a philosophical connexion, must be called second-rate. Whole chapters, or large portions of chapters, are given to such men as Hooker, Pemble, Culverwell, Chillingworth, Baxter, Whichcot, John Smith, More, Barrow, Taylor, Tillotson: so that, to judge from the table of contents, one might almost expect a history of English Latitudinarian Theology rather than of what is usually considered to be Philosophy. But this is in many ways advantageous: we are shown the philosophical side and the philosophical importance, such as it is, of men whose claims in this respect are generally overlooked, and we are forcibly reminded of a fact of the utmost moment in the history of philosophy, but which historians and critics are shy of recognising—the close relationship between modern philosophy and Christian theology. There are also accounts of Lord Herbert of Cherbury, Cudworth, and others, all interesting figures and well worth remembering, but of whom a

busy student of speculative thought, without leisure for the luxuries of his calling, may be excused for wishing to learn something without reading through their works. As for Sir Thomas Browne, he is out of place amongst writers whose mode of thinking may be called for the most part approximately coherent. Besides there is no way of making his acquaintance but at first hand, and no attempt at an analysis or redaction of his sentiments can be regarded in a serious light.

On the other hand the greater lights of the period are imperfectly reflected in this book, though the existence of the separate work on Bacon explains why he receives only a few pages in this one. The author's judgment of him remains the same, and is summed up in the following passage, of which the first sentence so resembles one which I have written elsewhere, that I would certainly have quoted had I then been acquainted with it. "*C'est un grand esprit plutôt qu'un grand philosophe. On verra que Locke malgré ce qu'il peut avoir perdu d'autorité, est plus près de ce dernier titre que lui, car s'il n'eût pas existé, l'histoire de la philosophie n'aurait pas exactement suivi le même cours, tandis que l'éloquent appel de Bacon au génie des sciences lui a valu plus d'admiration que d'influence.*" Locke gets a fourth of the whole work; but this chiefly consists of a good sketch of his life, and an account of his adversaries and influence, together with criticisms from the author's point of view, some of which we will presently consider. No account of his philosophy is given, on the ground that it may be found in any history of the subject: though, I confess, I do not know where to look for a sufficient one. It is too apt to be assumed that Locke's philosophy is an item of popular information. Hobbes, who on the whole hardly deserves to be subordinated to either Bacon or Locke, is somewhat meagrely treated: and this seems to me to be one of the flaws of the book. A chapter of some forty pages is allotted to him, but it is mainly biographical; and the author excuses himself from expounding Hobbes's doctrines by saying, that only a detailed account could do justice to the philosopher's systematic genius, and that that is more than the doctrines deserve: in which statement the first clause is better than the second.

M. de Rémusat cannot forgive Hobbes his political absolutism and his "atheism"—constructive atheism, say rather; for overt atheism is as far from Hobbes as from Bunyan, and in these pages the charge of atheism is urged against him a little too freely and persistently. Our French critic finds it difficult to understand how English liberals can forgive Hobbes his politics and speak highly of him as a thinker. But it seems that in Hobbes's case the common fate of men has been reversed: the good that he has done lives after him; the evil is interred with his bones. The idea of a return of absolutism in this country seems to most Englishmen so absurd that they can listen quite good-humouredly to its advocates. Perhaps, however, we should spare a thought for others. But even if absolutism should return, whether here or elsewhere, it can hardly stand upon Hobbes's basis; and as for his name and authority, innumerable enemies have

abused him too successfully to leave much influence to that. Besides, the strength of tyranny lies not in the arguments of its apologists, but in the character of its slaves. So that we may feel free to admire whatever good was to be found in Hobbes: his daring and powerful speculation, at once radical and systematic, a notable and precious possession in a country where such work is rare; his great manner of exposition, in which rigour is always tempered with humour and sound sense; and the many truths and countless suggestions everywhere embedded in his writings. Nor is it possible to overestimate his importance as a force in the literature of his age, both generally by setting an example of proof by reasoning, instead of by merely quoting authorities (though none could manipulate the authorities more ingeniously), and especially by inciting the advocates of more truly reasonable opinions to try to show that reason was on their side. Hobbes's admirers need never regret to have checked his career along the road to oblivion, even if *Leviathan*, besides being reprinted, should again be read.

Nor are all M. de Rémusat's particular criticisms of Hobbes in his best manner. At the beginning of the chapter appropriated to him, he writes: "Je ne sais qu'un philosophe de quelque renom qui puisse être appelé Baconien, et qui représente sans nuance et sans restriction l'empirisme ou le sensualisme absolu: c'est Thomas Hobbes." But it strikes the reader that a Baconian is not quite the same as a representative of absolute empiricism and sensationalism; and that precisely in as much as these characters differ, Hobbes was not a Baconian. Few writers so abound in conceptions hastily caught up, arbitrarily defined, and worked out ruthlessly in contempt of negative instances.

Almost on a level with Hobbes, M. de Rémusat finds a place for Lord Herbert of Cherbury: I do not know that it is overestimating the case to call this neglected thinker the hero of the work; and the author has entirely devoted to him another very instructive essay.\* He here observes that Herbert anticipated, rather than prepared the way for, the later Scotch and French philosophies, which have followed without imitating him. And in a *résumé* of English philosophy previous to Locke, our author finds generally that the writers, some of whose names I have enumerated above, agree for the most part in recognising, although in a somewhat confused and imperfect way, the leading principles of Common Sense and Eclectic Rationalism. This is naturally an interesting observation to one who is himself an adherent of those principles; but since little or no influence passed on directly from these early writers to Reid and Cousin, their importance in the history of philosophy is that they were the negative preparation for Locke, whose polemic is too commonly supposed (in spite of internal evidence of the contrary) to have been almost wholly directed against Descartes. Perhaps even Locke's perceptions of

\* *Lord Herbert de Cherbury, sa vie, ses œuvres ou les origines de la théologie naturelle et de la philosophie de sens commun en Angleterre.* Paris: 1874.



Descartes were not a little disturbed by preconceptions established in his mind by Lord Herbert and others. It would have been equally interesting to have shown how far amongst his immediate English predecessors Locke's own positions were anticipated.

M. de Rémusat is quite ready to be generous to Locke, whose empire in France was, it seems, "put an end to at the beginning of this century". Locke's theology satisfies, and his politics please, our author; though his psychology is of course inadequate. It is necessary, says M. de Rémusat, to recognise if not exactly innate ideas (an unfortunate phrase) still principles of reason implied in all experience and not derived from it, or, say, the reason itself. Noticing Condillac's position, that ideas, reminiscences, judgments, and abstractions, are only transformed sensation, he remarks: "*Mais dans ces termes mêmes, il faut un transformateur. Ce transformateur, c'est l'entendement.*" But surely this is misleading language. In order that sensations may be transformed there is needed, properly speaking, not a transforming agent, but conditions of transformation. These conditions may sometimes be merely the cessation of a present stimulus, as when a flash of light has passed and left only an idea of it much less vivid and definite; or they may be the lapse of time and intervention of other feelings, whereby our reminiscences decay; or they may be the relations into which given sensations enter with others and with ideas, as in judgment and abstraction. Under such conditions sensations are transformed as a matter of fact: but how the understanding, or the reason, or the will, or the ego interferes with the process or assists it, I do not know, and begin to despair of being made to conceive. Scientific psychology seems to require us to renounce these entities and all their works.

M. de Rémusat thinks that Locke's excessive fear of recognising innate ideas has paralysed his sagacity and prevented his finding in our faculties the truths which their activity presupposes. Unless, he says, there exist certain truths to which our faculties are related, it is plain that they are only a fortuitous and meaningless play. "*Citons en exemple la faculté du raisonnement: que veut-elle dire, si elle ne suppose que la conclusion sort des prémisses, que la conséquence se lie au principe?*" If this question is put to an adherent of Locke's school, he will reply that reason, regarded as a mental process, is, in Mill's words, "from particulars to particulars," and has nothing to do with the relationship of premisses and conclusion: a relationship which is incidental, not to the process of reasoning, but to a special mode of formulating in language the result of an already completed ratiocination, together with the proximate conditions of its validity. In an act of reasoning an inference is suggested by certain data with which it happens to be associated; and this some will perhaps consider to presuppose the laws of association. The validity of an inference depends upon the existence of a constant relation between facts, corresponding with the relation between itself and its data: in so far then as an inference involves belief, some will maintain that it presupposes the law of the relation between these facts. In the same sense it

might be said that whenever a substance combines chemically with another, it presupposes the law of combining equivalents. That is the sense in which the universal precedes its particulars; which it does, in the opinion of empiricists, no more in thought than in fact.

But I refrain from further criticisms of detail upon a work whose faults of detail are few, whilst sincerity and painstaking research are everywhere manifest in it, and in which well matured judgments and discriminating reflections are so thickly strewn throughout that should a reviewer begin to draw attention to them he need never make an end of commendation. I can, however, imagine a reader complaining that it is on the whole less a history of philosophy in England from Bacon to Locke, than an account of certain English writers of that period who were more or less tinged with philosophy. And these, moreover, are for the most part in relation to philosophy not representative English writers. Their notions and methods are those of the men who do not swim in the stream, but in the eddies and back-water of English thought: the stream does not bear them along with it, and they are more and more lost sight of and forgotten. M. de Remusat truly says of them that they lack elevation less than profundity. How familiar is the transcendental figure that slights his country's philosophy and dares not be other than elevated! Still although a record of second-rate opinion is hardly a history of philosophy, it may be of great use for illustrating the position of those thinkers in whom philosophy has culminated: it would be very useful if it only showed with what a mass of prejudice the better opinion had to struggle.

CARVETH READ.

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*Dialogues et Fragments Philosophiques.* Par ERNEST RENAN. Paris, 1876.

Curious for the insight it gives into the mind of the most widely-read of French philosophical thinkers, this work deserved a passing notice earlier. The *Dialogues* are three in number, bearing the respective titles—Certitudes, Probabilities, Dreams. The first is sustained among three friends all belonging to that school of thinking whose fundamental principles are worship of the ideal, negation of the supernatural and experimental investigation of the real; and the certainties to which the chief speaker, Philalèthe, gives utterance differ only in the setting from characteristic opinions of M. Renan's own expressed in the essays and letters, written a number of years ago, that are now reprinted (from the *Revue des deux Mondes*) as the *Fragments* of the present volume.<sup>1</sup> Some also of the probabilities and dreams, referred each to a new speaker in the second and third

<sup>1</sup> These are (1) 'Sciences of Nature and Historical Sciences'—letter to M. Berthelot, with his reply; (2) 'Ideal and Positive Science'; (4) 'Metaphysic and its Future'. A letter to M. Guérout on the theistic question is also included (3).

dialogues, may be found not dimly indicated in those earlier papers; but as M. Renan somewhat anxiously disclaims personal responsibility for them in their present form, it is nobody's business to fasten them upon him. He would have the dialogues generally to be regarded as no more than free conversations between the different lobes of his brain, and of course it should not be forgotten that dreams are but dreams, not always wishes, and much less convictions. They were written during the agony of the Commune, and hence their sombre cast. Hence also, it is implied, the degree of their variance from the political ideal of the last years in France; for M. Renan has by him in his desk, from before the time of the *coup d'état*, and will some day publish an essay on the 'Future of Science,' more comforting to people of democratic faith. He hopes, besides, to publish in the future a new book of *Hypotheses*, in which he will proceed on a method partly employed in the present work, and by an ideal construction of different world-systems, each lacking some capital element involved in the present frame of things, will seek to impress the true character of each.

The certitudes of the first dialogue are but two:—(1) In all parts of the universe within human ken there is no trace of the action of higher beings than men; at the same time (2) the whole world is working towards an end. It is urged, as M. Renan has urged before, that if there were external beings intervening in terrestrial affairs their action could not fail to be perceived: either therefore there are none or, if any actually exist in other worlds, they are powerless to make their existence known across space. But though, so far as appears, there is in the detail of events within the universe nothing expressly intentional apart from the action of men and animals, but everything happens according to general laws from which no single exception for special ends has ever been established, yet, on the other hand, nothing is more clear than that the whole of Nature is in travail, working darkly towards a goal. The proof here led is in the vein of Schopenhauer. Philalèthe sees a manifestation of Will, conscious or unconscious, in all the phenomena of life, high and low; he finds that all particular manifestations from the lowest to the highest subserve no ends of individuals but of species only; he thinks of Nature in general as the great Egoist that is for ever duping the individual for the well-being of the whole; and he parts from Schopenhauer only on the point of the feelings with which the self-conscious victim, man, should bow to the might of the universal process. Not the spirit of revolt, but resignation, gratitude, and love should fill the mind that has awoke to the conception of the unknown aim whither all is tending.

It is thus certain to Philalèthe (and M. Renan) that the universe as a whole reveals an obscure consciousness, spontaneous, analogous to that which presides over the development of the embryo or animal. What the new protagonist, Théophraste, in the second dialogue, thereupon essays is to indicate the probable outcome of this world-process. The obscure spontaneous consciousness, he thinks, is destined to become a clear reflective consciousness. The desire everywhere manifested to be, the

universal thirst for consciousness, means that the Ideal will of necessity become realised, and it is ever being realised more and more. All that is good in the universe generally and in the history of humanity becomes capitalised and increases, while things that are not good clash with one another and pass out of being. It may or may not be on earth and by the immediate effort of mankind : where and when in the infinity of space and time it will be brought to pass, cannot be guessed ; but here or there, at one time or another, Reason will finally reign, Science will become absolute, and absolute Science means infinite Power. The development in time of a true reflective world-consciousness—this is what M. Renan must be supposed to think at least probable. Can there be any more particular speculation as to its nature ? Théociste in the third dialogue stands forward to reply with dreams.

The dreams, however, turn out to have reference only to a possible development of man on earth : what might be, if it should be elsewhere and under quite other than human conditions that the world-ideal becomes realised, we are left to guess. On earth, as life actually is, the collective character of animal existence by relation to the component living cells points to the reality of corporate human life in a town—a church—a nation ; and as the (so-called) individual man or animal is higher in the scale of life or consciousness than the cell, so the corporate existence is to be ranked higher than the life of the individual. Thus, then, a future consciousness of humanity in general may be conceived, infinitely superior to aught that now exists ; humanity becoming, as it were, a great tree, with individuals for shoots, and the consciousness of each being taken up into the consciousness of all. Now, in this relation, there are three conceivable solutions of the problem of humanity, which may be metaphorically described as (1) the democratical, (2) the aristocratical and (3) the monarchical. In accordance with the first of these the higher conscious life to be—the ideal—may be realised by the conversion of all mankind to reason, but this democratic solution is not at all probable. How, for instance, shall women be made rational—women whose business it is to be “good and beautiful” ? The attempt to cultivate the many can end only in the extinction of culture. Indeed, the aim of humanity, as things are now, is rather to produce great men with a public to comprehend them, and this at the expense of ignorance in the masses. More likely by far, therefore, is the aristocratical evolution, namely, that out of mankind should arise a limited class of beings perfectly rational, with the omnipotence that comes of omniscience. Powerful enough to make earth a hell to mankind in general, and so in a manner realising the worst terrors of old religion, they yet, as guided by perfect reason, would act like veritable gods. It would probably be only after a period of fearful struggle with the common intelligence of the mass of men that Science could thus gain the upper hand, but once attained its supremacy might become for ever established by incarnation in such a special order of beings. There is no conception worked out more elaborately in the

*Dialogues* than this one of a spiritual oligarchy wielding material power, and it strikes the reader as something more than a bare dream of M. Renan's.

It has to contend, however, with the third conception—of the world becoming at last one single conscious centre, in accordance with the monarchical ideal in politics and the religious notion of a single Deity. But whether this final term of the 'deific evolution' is to be viewed as excluding all such finite personalities as now exist or as being the resultant of them all, is left undetermined. The dreamer's first privilege of incoherency and inconsistency is indeed put much in force all through; and, from the point of view of sober philosophical criticism, it is extremely difficult to understand the nature of that divine consciousness which is thus to be. It is averred most positively (p. 89) that a consciousness is complete only when it results in an individual identity—in a single sensorium constituted by a nervous mass moving a determinate organism; and this, we know, is the description of a man or animal, without prejudice to the biological truth that the organism is an aggregate of quasi-independent living cells. What then of the consciousness which M. Renan claims, within actual experience, for such a corporate entity as a town, church or nation? It is called superior, but at all events it cannot be "complete". Can then any consciousness that is predicated of the universe present or to come be "complete" either, if no analogue for a brain can be assigned or supposed for it? And if not complete, is there any meaning in describing the more and more perfect outcome of the world-process in terms of consciousness at all? Some feeling of this difficulty was probably in M. Renan's mind, when before the end of the dialogue he makes Théoctiste say that consciousness is after all, perhaps, a secondary form of existence, and that the word has no sense when applied to the All, the Universe, God (p. 140); that it is not consciousness (which has relation to space) but the Idea or Ideal that alone eternally exists. He has urged the same before in the reprinted fragments (see especially p. 253). But then what becomes of the fundamental argument of the work—the "certainty"—that the end to which the whole universe tends in the production of a consciousness (p. 24)?

The book cannot be said to have much philosophical importance, but it discloses very vividly something of the fermentation of thought going on in these days.

EDITOR.

## IX.—NEW BOOKS.

[These Notes are never meant to exclude, and sometimes are intentionally preliminary to, Critical Notices of the more important works later on.]

*Paradoxical Philosophy: A Sequel to the Unseen Universe.* London: Macmillan, 1878. Pp. 235.

The anonymous "Editors" of this work disclaim, in regard to its conversational form, "any thought of imitating Peacock or Mallock—far less Christopher North, Bunyan, or Plato," and, in point of fact, they do not succeed in attaining the literary level of even the least of these writers. Nor can it be said that the poverty of execution is compensated by novelty of ideas. The book comes after the *Unseen Universe*, but is in no other sense a sequel to that widely-read production. At one place, a short and, on the whole, well-pointed statement of the materialistic view of the universe, put into the mouth of a "Dr. Hermann Steffkraft," calls forth (from "Stephen Fairbank") a brief rehearsal of some of the main positions in the earlier work—to the almost utter confusion there and then of the worthy German. All the rest is mere by-play of the order before indicated. There is not the least attempt to make the argument of the *Unseen Universe* less irrelevant to the momentous conclusions which it was, evidently in good faith, intended by its distinguished authors to support. And yet, "in the compilation of this small volume," such as it is, the Editors say they "have to record with gratitude the assistance rendered to them by various members" of a certain Society called the "Paradoxical".

*The Art of Scientific Discovery; or, The General Conditions and Methods of Research in Physics and Chemistry.* By G. GORE, LL.D., F.R.S. London: Longmans, 1878. Pp. 648.

"The object of this treatise is to describe the nature of original Scientific Research, the chief personal conditions of success in its pursuit, the general methods by which discoveries are made in Physics and Chemistry, and the causes of its failure; and thus to elucidate, so far as possible, the special mental conditions and processes by means of which the mind of man ascends from the known to the unknown in matters of science. . . . The book is divided into five parts—the first containing a general view of the subject; the second, general conditions of research; the third, personal preparations of research; the fourth, actual working in the art; and the fifth, various special methods of discovery, classified and illustrated by numerous examples."

*Education as a Science.* By ALEXANDER BAIN, LL.D. (International Scientific Series). London: Kegan Paul & Co., 1879.

The four articles bearing the above title, contributed by the author to MIND, make the psychological introduction to the present volume, being almost one-fourth of the whole. The remaining three-fourths discuss the more special educational topics. A chapter is devoted to the explanation of a number of terms and phrases that play a leading

part in the various discussions :—Memory, Judgment, Imagination, Information and Training, &c. Next is a chapter on Education Values, or an estimate of the comparative worth of the usual subjects of instruction : a large space being given to Science. Under the designation, Sequence of Subjects (Psychological and Logical), a number of matters have been brought to the foreground to lighten the burden of the chief topic—the Methods of Teaching. This topic is then entered on ; and includes, among the more obvious points, a minute handling of the Object Lesson, the scope of which the author considers to stand in want of being more carefully assigned than has yet been done. A separate chapter is devoted to the Mother Tongue. Then follows a discussion of the utility of Latin and Greek ; to which is appended a proposal for a Renovated Curriculum of the higher studies. Finally, a long chapter is given to Moral Education, and a shorter one to Art. “The general strain of the work is a war not so much against error as against confusion.” The author takes “every opportunity of urging that the division of labour in the shape of disjoining incongruous exercises, is a chief requisite in any attempt to remodel the teaching art”.

*Education : Intellectual, Moral and Physical.* By HERBERT SPENCER. Cheap edition. London and Edinburgh : Williams & Norgate, 1878. Pp. 171.

Besides being largely read in the United States, Mr. Spencer's *Education* has been translated into French, German, Italian, Russian, Hungarian, Dutch and Danish, and he wishes now by this cheap edition to make it accessible to a wider circle of readers at home. The text is reproduced without change, more pressing occupations standing in the way of the revision it would otherwise have undergone.

*The Localisation of Cerebral Disease.* Being the Gulstonian Lectures of the Royal College of Physicians for 1878. By DAVID FERRIER, M.D., F.R.S. London : Smith, Elder & Co., 1878.

“These lectures are intended to serve as the complement from a clinical and pathological stand-point of the author's work on “The Functions of the Brain”. They retain the form in which they were delivered as the Gulstonian Lectures of the College of Physicians, but have been revised and supplemented by numerous additional facts and illustrations.”

*The Principles of Human Knowledge :* being Berkeley's celebrated Treatise of the Nature of Material Substance (and its relation to the Absolute), with a brief Introduction to the Doctrine and full Explanations of the Text ; followed by an Appendix with Remarks on Kant and Hume. By COLLYNS SYMON, LL.D. London : Tegg, 1878. Pp. 220.

Dr. Symon claims that this is “the only edition with explanations that has ever been prepared by an adherent of Berkeley,” and further that he is the only adherent “who has been found to raise his voice against the increasing misrepresentations of hostile editors and adver-



saries". Who exactly these are is never expressly stated by Dr. Symon, but in his Introduction he sets out (not for the first time) with a particularity that leaves nothing to be desired, a list, in thirty-six propositions, "of the egregious blunderings that are to be met with in books upon this subject among the other nations of Europe as well as among ourselves". In an appendix he seeks to trace back to Hume through Kant and Reid the origin of the misrepresentations of the true Berkeleyan doctrine; Hume, as he has managed to discover, having first, when he was "an attorney's clerk in Edinburgh" (!), attacked the doctrine of Phenomenal Matter as pure nonsense, and next, when he found this of no avail, having turned round and allowed the doctrine to be true, but (like the "merry Scotsman" he was) pretended that it lent the most admirable support to Scepticism. The fault of Reid and Kant, when their turn came, lay in their not seeing that Hume "was merely and undisguisedly sarcastic and in jest, never in earnest, in what he wrote on Metaphysics". They took him for a serious writer, and this has been ever since believed without question, till now when the strange misconception is for the first time pointed out by Dr. Symon. Berkeley's treatise itself is, in the present edition, split up into three parts and these again into chapters, corresponding with the main divisions of the argument. Besides explanatory headings and notes, there is also given in a "General Index" at the end a re-statement of the editor's interpretations in alphabetical order of topics.

*René Descartes : His Life and Meditations.* A new Translation of the *Meditationes*, with Introduction, Memoir, and Commentary. By RICHARD LOWNDES. London : F. Norgate, 1878.

Lighting some little time ago on Kuno Fischer's *History of Modern Philosophy*, Mr. Lowndes was drawn afresh to the study of Kant, Leibnitz, and Descartes—particularly Descartes, and conceived the design of translating the *Meditationes*, apparently in ignorance at that time of Prof. Veitch's version (which is hardly "scarce") and the earlier version of Molyneux, though they have since become known to him. He gives the following account of other parts of his work :—

"The Introduction, for which the materials have for the most part been stolen from Fischer, and the concluding observations, or Commentary, are simply intended to fix the place of the *Meditations* in the history of philosophy, by exhibiting, on the one side the state of the science at the time the *Meditations* were written, and, on the other, the manner in which the problems and solutions of Descartes are taken up into the system of Kant."

*Philosophical Fragments*, written during Intervals of Business. By J. D. MORELL, LL.D. London : Longmans, 1878. Pp. 278.

Following the lines of thought taken up in his previous works, the author here gives first a sketch of German Philosophy from Leibnitz down to the present time; secondly, a chapter on the Theory of Knowledge, in which he seeks to prove that the inductive method is "the real and proper method for the human intellect to follow even in the most recondite and metaphysical researches"; thirdly (in the

form of three lectures) "an application of some of the modern doctrines of psychology to the principles of Education"; finally, a post-script on the latest phase of Hartmann's Philosophy.

*Final Causes*: By PAUL JANET, Member of the Institute, Professor at the Faculté des Lettres of Paris. Translated from the French by William Affleck, B.D., with Preface by Robert Flint, D.D., LL.D., Professor of Divinity, University of Edinburgh. Edinburgh: T. & T. Clark, 1878. Pp. 508.

This work, by the present leader of French spiritualistic philosophy, has already, in its original form (1876), been critically noticed in MIND, No. VI. Translated now for English readers, it is first of all prefaced by the author himself, who is particularly gratified "to be introduced in England by way of Scotland, that country of profound reason, where wisdom has always been mingled with a certain agreeableness and good grace commanding sympathy". "Great Britain (he adds) has always been the classic land of final causes: it is there that national theology originated, has been developed, and has held its ground with honour down to our days." The present work, however, is "not a treatise of natural theology, but an analytical and critical treatise on the principle of final causes itself"; "its foundations, authority, limits and signification" being sought "by confronting it with the data and conditions of modern science as well as with the doctrines of the boldest and most recent metaphysics".

Prof. Flint, who adds another preface, says of the book that, "although not an absolutely exhaustive treatise on final causes, seeing that it does not attempt to trace their presence in the regions of intellect and emotion, morality and history, it is the most comprehensive work which has been written on the subject". He further defends it against some of the strictures passed by M. Janet's critic in MIND; in particular urging that the main idea of the book was not seized, namely, that final causes are not inconsistent with causation, and maintaining against the critic (Mr. Sully) that our knowledge of design in nature is related to our knowledge of conscious thoughts and volitions in each other, since the only evidences for the existence of other human minds are evidences of design.

*The Ethics of Positivism*: A Critical Study. By GIACOMO BARZELLOTTI, Professor of Philosophy at the Liceo Dante, Florence. New York: Somerby, 1878.

Prof. Barzellotti's essay, *La Morale nella Filosofia positiva*, when it appeared in 1871, drew considerable attention in this country as the work of a well-informed and equitable, if not exactly sympathetic, critic of English Ethical Science. The Essay was predominantly a criticism of English ethics; the word 'positive' being used in the wider sense now not uncommon, as synonymous with 'scientific' (that is to say, 'in the spirit of the natural sciences'), and English philosophy appearing to the author most to conform to that description. In a new preface (pp. xxiv.) written for the present translation, the author

seeks to reply more especially to Mr. Sidgwick's criticism of his essay in the *Academy* of 1st July, 1872. Charged with confounding Egoistic and Universalistic Hedonism under the common term of Utilitarianism and with representing the whole history of ethical controversy as a duel between Intuitionists and Utilitarians, he maintains that to him, trying theoretically to account for moral obligation, only two principles could appear "distinct and irreducible, viz., the principle of absolute obligation and the *opposite* principle of relative or conditional obligation—the principle of happiness, of the useful, of interest whether general or individual". On another point remarked upon by Mr. Sidgwick, namely, the assertion that no moral investigation properly so called can be based on the doctrines of Comte, Prof. Barzellotti is willing to accept his critic's statement that Comte did not so much pretermit introspective observation as practise it in the unreflective, unanalytical way of common life. Still he finds Comte's radical fault to be that, "from the *fact* objectively observed that human beings *act* on each other through their social relations by virtue of certain impulses, he passes to the conclusion that they must consequently act so and so in virtue of a moral necessity"; though the fault is shared by all "the followers of inductive morality". The translation is by Signor E. Gandolfo in conjunction with Miss I. I. Olcott.

*Des Sociétés Animales : Étude de Psychologie comparée.* Par ALFRED ESPINAS. 2nd Edition. Paris: Germer Baillière, 1878. Pp. 588.

M. Espinas's remarkable study in comparative psychology, reviewed in MIND IX., appears now in a second edition, increased by about half its original size. The increase consists mainly of a comprehensive Historical Introduction (pp. 155), in which the author seeks "to pass under review the principal systems of social philosophy, in their main features, so as to discover the various solutions of which the problem of social life in general admits, and also to determine what theories have been broached, were it only incidentally, by philosophers on the subject of animal societies in particular."

*La Morale d'Epicure et ses Rapports avec les Doctrines contemporaines.* Par M. GUYAU. Paris: G. Baillière, 1878. Pp. 290.

"This volume is the first half of a Memoir *couronné* in 1874 by the *Académie des Sciences Morales et Politiques*, its publication having been delayed till now by the author's ill-health. The original Memoir, which was very long, had for its subject the Utilitarian Morality and extended from Epicurus to the English school of the present day. After having recast and completed all that concerned Epicurus and his direct successors, the author thought it right to make of this a separate volume. Epicurus is one of those philosophers whose ideas are most powerful in the present time; he is one of the most modern of the ancients, and his ethical system, sometimes so ill understood, has seemed to the author worthy of a special and conscientious study.

The second part of the original Memoir will be published presently under the title *La Morale Anglaise contemporaine (Evolution et Darwinisme)*."

*L'idée moderne du Droit en Allemagne, en Angleterre et en France.*

Par ALFRED FOUILLÉE, Maître de Conférences à l'École Normale Supérieure. Paris: Hachette, 1878. Pp. 364.

The author who has already left his mark on contemporary philosophy by an original treatment of the ethical question of Liberty and Determinism (*La liberté et le déterminisme*, 1872; see MIND VI, p. 372), makes here a new application of his characteristic method. According to him,

"Philosophy in the 19th century has set itself to analyse the ideas on which men have hitherto rested their moral, social and religious beliefs, . . . and among the ideas which have to become transformed, if they are not to disappear, the notion of Right or Law is one of the foremost, inseparable as it is from the notions of Liberty and Duty. The older spiritualism can no longer be maintained; the metaphysical entities to which it appealed are as impotent in the question of Right as in that of moral liberty. Must the conception of "Rights of Man" then be rejected, even as a pure ideal? Has Germany or England been better inspired than France in referring the whole civic and political order to a simple combination of forces or of interests, and in opposing the principle of aristocratic inequality to that of democratic equality? Perhaps we shall come to see that each of the three points of view taken by the chief modern peoples has its relative truth. Perhaps it is possible to construct a new theory of Right, at once naturalistic and idealistic, and comprehensive enough to reconcile all the adverse systems."

*Prolegomena zu einer anthropologischen Philosophie* Von Dr. FRIEDRICH VON BÄRENBACH. Leipzig: Barth, 1879. Pp. 386.

This is the first part of a new *Foundation of Critical Philosophy*, to be followed by other parts having each a certain independence but all subserving the one end of establishing by the side of the special sciences a philosophy in the strictest sense scientific. The present first part has for its special subject the "Axioms of the Critical Theory of Knowledge". The author's conception of philosophy, as bound to be anthropological, does not essentially differ from that which has long prevailed in this country, though it is carried out by him according to the critical method of Kant, instead of being based, as in England, both before and after the time of Kant, on the results of psychological inquiry. In following Kant's lead, however, the author does not neglect the later works of English thinkers.

*Excerpta e Libro Alfredi Anglici "De Motu Cordis," item Costa-Ben-Lucue "De Differentia Animæ et Spiritus" Liber translatus a Johanne Hispalensi.* Als Beiträge zur Geschichte der Anthropologie und Psychologie des Mittelalters, nach handschriftlicher Ueberlieferung herausgegeben und mit einer einleitenden Abhandlung und Anmerkungen versehen. Von Dr. CARL SIGMUND BARACH. Innsbruck: Wagner, 1878. Pp. 139.

This is the second part (the first was noticed in MIND V.) of the *Bibliotheca Philosophorum Medice Aetatis*, designed in a most praiseworthy manner to fill the gaps in our knowledge of the philosophical literature of the Middle Ages. Prof. Barach seeks in the present issue to give an insight into the anthropological and psychological thought of the period, selecting the work *De Motu Cordis* of Alfred Anglicus, hitherto unprinted, though freely referred to in the MS. form by Hauréau and others. More than half of the whole work is given in selected excerpts, the rest being omitted only because it consists of mere repetitions or because of the hopeless corruption of the text. There is added a Latin translation of the Arabian treatise, also hitherto unprinted, of Costa-Ben-Luca *De Differentia Animae et Spiritus*, from which Alfred chiefly drew and which was otherwise much considered in the Middle Age. Costa-Ben-Luca was a Christian physician and philosopher of Baalbec and Bagdad, living from 864 to 923. Alfred's date has given rise to much question. Prof. Barach, after a careful investigation, assigns 1220-27 as the period of his literary activity. The treatise *De Motu Cordis* is truly mediæval in being based on the record (mostly defective) of earlier opinions rather than on fresh and original observation, but it is full of historical interest as showing how marked was the desire, before the modern period, to establish a definite relation between mind and the bodily organs. Prof. Barach quotes in regard to it Hauréau's striking observation on Scholasticism generally—"La scolastique, c'est la révolution qui se prépare".

*Phänomenologie des sittlichen Bewusstseins.* Prolegomena zu einer jeden künftigen Ethik. VON EDUARD VON HARTMANN. Berlin, 1879. Pp. 871.

This work (which appears ten years after the publication of the *Philosophie des Unbewussten*) is intended to prepare the way for a scientific system of Ethics, by a critical review of the facts of our moral consciousness, and statement of the principles which they seem to imply. The first division of the book (100 pages) is entitled "The pseudo-moral consciousness as propædæutic for Morality," and is subdivided into (1) Egoistic Pseudo-morality and (2) Heteronomous Pseudo-morality: in other words, the principles of Individual Happiness and an external authoritative Rule of Right. The remainder of the book is divided into three parts: (a) The springs of Morality, or the subjective moral principles, (b) Moral Ends, or the objective moral principles, and (c) The foundations of Morality, or the absolute moral principles. In the first part we have a discussion of the Morality of Taste or the æsthetic springs of action, of the Morality of Sentiment, and of the function of Reason with regard to Conduct. The objective principles are two—the social eudaemonistic and the evolutionary (the development of culture), their combination furnishing the conception of a moral world-order as *τέλος*. The last hundred pages treat of the absolute principles needed for the support of empirical moral ends.

*Geschichte der philosophischen Terminologie.* Im Umriss dargestellt. Von RUDOLF EUCKEN, Professor in Jena. Leipzig: Veit, 1879. Pp. 226.

The author fell upon the idea of this work in the course of a general investigation into the history of philosophical notions. The question of terminology was inevitably involved with this, and it seemed to him that a separate treatment of it might be useful; more especially as, six years ago, he had been moved to propose in the *Philosophische Monatshefte* that some learned society should undertake the production of a dictionary of philosophical terms, and meanwhile, though the proposal had been highly approved of in many quarters, nothing had been done towards its realisation. The present attempt has not been made with any notion of its being more than a beginning. The history of philosophical terminology is traced successfully among (1) the Greeks, (2) the Romans and the Schoolmen, (3) the Moderns, (4) the Germans. There follows next a discussion of the history of particular terms; and the necessary index is supplied at the close.

*Logik.* Von Dr. CHRISTOPH SIGWART, o.ö., Professor der Philosophie an der Universität Tübingen. 2ter Band. Die Methodenlehre. Tübingen: Laupp, 1878. Pp. 612.

The concluding volume of the author's comprehensive treatise. It has given him, he says, great satisfaction to find that in one chief department of methodology, the theory of induction, Professor Jevons's views in the *Principles of Science* are in essential agreement with his own; but he has been more sparing than Professor Jevons in his references to the history of science, preferring to illustrate the abstractions of Logic by things familiarly known.

*Die Physiologie des Schönen.* Von S. BYK. Leipzig: Schäfer, 1878. Pp. 286.

An analysis of the Beautiful and description of its various forms in nature and art, embodying the results of long-continued observation and reflection, and written down by way of mental recreation in the interval between the composition of the first and second parts of the author's *Vorsokratische Philosophie der Griechen*. The author claims as an advantage in treating the subject, that he neither has a metaphysical system of his own nor is prepared to subscribe absolutely to the system of anybody else.

*Tipui sovremennoi filosofskoi misli v Germanii. Ocherki iz puteshestviya za granitsu.* (Characteristics of Contemporary Philosophical Thought in Germany. Sketches from a foreign journey.) By P. MILOSLAVSKY, Professor of Philosophy in the University of Kazan. Kazan, 1878.

The author sends the following statement:—

"In the argumentative part of this work it is contended that a scientific philosophy cannot be constructed *à priori* without reference to scientific

experience. By scientific and philosophical analysis of mind and body it has been established that human knowledge cannot be absolute, but it is no less true that our nescience is relative also: in the nature of external things, and of the organism with its mental endowment, there is no more ground for absolute nescience than for absolute science of anything. Now, if all natural phenomena whatever were appropriated by different classes of special inquirers, there could be no question of a philosophy independent of the sciences. But it is not to be forgotten that all special scientific inquiries, and the phenomena of human knowledge generally from prehistoric times to the present day, themselves constitute a particular class of real and natural phenomena; and these, while not to be confounded with the related subjects of psychology or logic, are left for special investigation by the philosopher. Philosophy, in fact, may be viewed as itself a positive natural and special science, having for its subject the methodical scientific investigation of the relations and laws of human knowledge and the world as known. From this point of view there is no philosophical problem, even the most perplexed, that may not admit of scientific resolution, and only such a Philosophy is able to bring into organic unity the separate philosophies of 'religion,' 'history,' 'right,' 'art,' &c."

N. GROTE. *Snovidenia kak Predmet naoutschnago Analisa (Dreams as an Object of Scientific Analysis)*. Kiev, 1878. Pp. 68.

The author is professor of philosophy in the Institute of Prince Besborodko, Njeschin, Russia, and this was his inaugural thesis. It is an attempt to treat dreams in a strictly *scientific* spirit, to the exclusion (1) of the *prehistoric* view, found still among savage tribes, which ascribes to dreams an objective reality, and (2) the *symbolic* view, which regards them more or less as portents. The scientific explanation seeks to assign their physiological conditions in the nervous system and their psychological constituents in the foregone experience of the individual. Physiologically, dreams are due to disordered brain activity, some parts being excited or over-excited while others are more or less exhausted. This being so it is a mistake to suppose, with Volkmann, that dreams afford, subjectively, a revelation of the true moral character of the individual. They are rather to be viewed, with Maury, as a rudimentary form of mental alienation.

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*The Colour-Sense, its Origin and Development: An Essay in Comparative Psychology*. By GRANT ALLEN Trübner and Co.

"Starting with the objective nature of Colour as depending on frequency of æther-waves, this *forthcoming* work endeavours to determine the causes which led to the evolution among animals of an organ capable of differential stimulation by the different colours. It traces the mutual reactions of insects and flowers, and of birds or mammals and fruits; collects the evidence in favour of the existence of a colour-sense among articulates and vertebrates; and discusses the mode in which it most probably arose. Then, after considering the nature of Taste, it points out the reasons for believing that a taste for bright colours exists only amongst fruit-eating or flower-haunting animals, and that they alone show secondary marks of its effects in the sexual selection of brilliant mates. Coming down to man, it combats the "Historical Development" theory of Geiger, Magnus, and



Gladstone; asserts the community of colour-perception throughout the whole race; and gives evidence from ancient art-products and modern savage life. A chapter is then devoted to the aesthetic value of colour; and the work closes with an inquiry into the growth of the colour-vocabulary."

*The Realistic Assumptions of Modern Science examined.* By THOMAS MARTIN HERBERT, M.A., late Professor of Church History and Philosophy in the Lancashire Independent College, Manchester. London: Macmillan & Co., 1878.

"This *forthcoming* work is an attempt to show that Realism, when followed out to its logical consequences, confutes its claim to represent things as they are, and demonstrates that its assertions can be valid only within the limits of phenomena, or respecting things as they seem. Various Dualistic Theories of Mind and Matter having been examined, the futility of all attempts to explain the connexion between brain-changes and thoughts is pointed out, and the conclusion is arrived at that it is absolutely impossible to combine movements and thoughts, as we conceive them, into one self-consistent scheme; but that dealing with the facts of the material world, as physical science deals with them, we can find no trace of, no room for, any facts of consciousness. This conclusion is confirmed by a consideration of the failure of Realistic Science to explain the connexion of a sensation with its distant object, the realisation of a purpose, the rational character of mental life, the moral and spiritual nature of man, the facts of memory and an enduring Ego, the conceptions of Time, Space, and Energy, and our conviction of the existence of an external Power as the cause of sensation. The argument proceeds to show that it is necessary to transcend phenomena, and recognise *efficient* cause or power in order to escape Idealism and arrive at anything external; and that Positivists violate their fundamental principle in assuming phenomena to be external and to have occurred in succession. It is contended that it is in virtue of inferences which transcend phenomena that we recognise external force or efficient causation, or believe in the existence either of a permanent Ego or of other minds like our own; and that the belief in a God is a conviction resting upon similar grounds, and one that must stand or fall according as those other conclusions are accepted or rejected. It is further maintained that personal attributes furnish the loftiest conceptions we can frame of the Divine Being; and that such conceptions, whilst necessarily relative, are as real and reliable as any knowledge we can possess."

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## MISCELLANEOUS.

MR. GEORGE HENRY LEWES, died at his residence the Priory, North Bank, on the 30th November, after an illness of ten days, and was buried at Highgate Cemetery on the 4th December. One of the foremost philosophical workers of his generation has thus most unexpectedly and almost suddenly been removed at the time when he could least be spared. Mr. Lewes, in the execution of his comprehensive philosophical enterprise, was just approaching those "Problems of Life and Mind" with which he had acquired an exceptional fitness to deal. It had been, he tells us, his original intention to include in his last published (third) volume, *The Physical Basis of Mind*, an exposition of the part he conceived the brain to play in physiological and psychological processes, but this he had to postpone till it could be accompanied by a previous survey of the psychological processes that would make the exposition intelligible. Such a survey, if it included a detailed treatment of the relation of the individual mind to that "social medium" which the author in his first volume had so impressively accentuated in general terms, might be expected to mark a real advance in psychological science; while his original researches into the nervous system, protracted through many years, could not fail to give him a familiarity with the necessary physiological data hitherto enjoyed by few professed psychologists. Fortunately, there is reason to believe that the composition of the expected fourth volume is left in an advanced state, and it is, moreover, understood that the work of editing this and Mr. Lewes's other philosophical remains will be undertaken by one who is not more fitted for such a task by knowledge of her life-companion's inmost thoughts than by surpassing native endowment. Mr. Lewes was born in London in April, 1817, and was educated by Dr. Burney at Greenwich. After being employed for a short time as a merchant's clerk and having also begun the study of medicine, he went abroad in 1838 to learn the German language and study philosophy. Returning home in 1839, at the age of 22, he adopted the profession of literature and for many years displayed extraordinary versatility as journalist, reviewer and author. The stages of his advance as a philosophical and scientific writer are these:—*Biographical History of Philosophy from Thales to Comte* in 1845, 2nd edition enlarged in 1857, 3rd edition still more enlarged and with the new title *History of Philosophy* in 1867, 4th edition in 1874; *Comte's Philosophy of the Sciences* in 1853; *Physiology of Common Life* in 1859-60; *Aristotle: a Chapter from the History of Science* in 1864; *Problems of Life and Mind*, 3 vols., in 1875-7.

MR. HERBERT SPENCER has deferred the continuation of his *Principles of Sociology*, and is now engaged upon the *Principles of Morality*, which has always been designed as the crowning work in his "System of Philosophy".

Mr. W. C. COUPLAND has undertaken (for Messrs. Trübner) the translation of Hartmann's *Philosophie des Unbewussten*.

Dr. MAUDSLEY has retired, after fifteen years' service, from the joint-editorship of *The Journal of Mental Science*, published by authority of the Medico-Psychological Association. Dr. T. S. Clouston who was associated of late years with Dr. Maudsley, has now associated with him in the editorship (since the number of October last) Drs. D. Hack Tuke and Geo. H. Savage.

MR. MALCOLM GUTHRIE, who sent us word a year ago of the formation in Liverpool of a club for philosophical reading, now sends a copy of a printed program for 1878-9, according to which the club is now definitely constituted under the title of "Society for the Critical Examination of Modern Philosophy," meaning "the systematic study and discussion of such Philosophical Works as may from time to time be decided upon by a majority of the members, the subject for each evening to be introduced by a member in a critical or expository statement of a section of the work under consideration." The Society meets once a month at the Royal Institution, Colquitt Street. Lewes's *Problems of Life and Mind*, Vol. I., is the subject of study for the present session.

MR. DAVID SYME writes as follows from Melbourne :—

"I was much interested in reading the Rev. W. Cunningham's essay on "Political Economy as a Moral Science" in the July number of MIND. In that essay Mr. Cunningham lays down the following propositions :—

1. That things in themselves have no place in Political Economy, but only things as known and as used.
2. That value, therefore, is not an inherent quality in a commodity, but only a relation.
3. That economic phenomena are not the effects of one force, but of many ; that these forces are not physical but mental, and that Political Economy is therefore not a physical, or an exact, but a moral science.

It is only due to myself to state that the above propositions are fully stated, and for the first time as far as I am aware, in my *Outlines of an Industrial Science*, published (by Messrs Henry S. King & Co.) about two years ago. Mr. Cunningham, however, appears not to have seen my work—a gratifying fact in one respect, proving as it does that we have both arrived at the same results by independent investigation."

MR. C. EVANS, writing from Llandaff, sends the following on "Temperature and Touch":—

"Might not experiments upon parts of the body, as feet or arms, which are 'gone to sleep' help to furnish a solution of the puzzling question as to the connexion between touch and temperature? Among the arguments brought forward in support of the view that feelings of touch and feelings of temperature do not come from the same nerves, I have never heard this kind of test mentioned. Yet if, e.g., one's foot is so sound 'asleep' that one cannot feel the pressure of the floor when using it to stand on (the foot being shod as usual or incontact with a carpet), is it not the case that if one steps on a cold surface, as stone or polished wood, the foot that is asleep gives at least as strong a sensation of cold as the other foot, which is not asleep?"

THE JOURNAL OF SPECULATIVE PHILOSOPHY.—Vol. XII. No. 4. F. A. Henry—'Christianity and the Clearing-up'. J. Royce—'Schiller's Ethical Studies'. R. H. Worthington—'Jacobi and the Philosophy of Faith'. Hegel—'On Romantic Art' (transl.). G. B. Halsted—'Statement and Reduction of Syllogism'. Notes and Discussions.

REVUE PHILOSOPHIQUE.—3me Année, No. X. H. Taine—'Géographie et Mécanique cérébrales'. Carrau—'Moralistes Anglais contemporains : M. Lecky'. Séailles—'Philosophes contemporains : M. Ravaisson'. Notes et Documents—'La Conscience sous l'action du Chloroforme, d'après H. Spencer'. 'De la Durée des actes psychiques élémentaires, d'après Kries et Auerbach'. Analyses et Comptes-rendus. Revue des Périodiques étrangers. Correspondance. No. XI. A. Dastre—'Le problème physiologique de la vie'. G. Compayré—'La psychologie de l'enfant, d'après des publications récentes'. H. Joly—'La jeunesse de Leibniz à l'Université de Leipzig'. Notes et Documents—'L' Intelligence animale, d'après M. Romanes'. 'Note sur le sens musculaire, par le Dr. G. Pouchet. Analyses et Comptes-rendus. Notices bibliographiques. Rev. des Périod. No. XII. C. S. Peirce—'La Logique de la Science' (I.). A. Penjon—'La Métaphysique phénoméniste en Angleterre : M. Shadworth-Hodgson' (I.). P. Regnaud—'Études de Philosophie indienne, l'École Vedanta'. Variétés—'Les Etudes psychologiques en Allemagne : M. Lazarus', par Th. Reinach. Analyses et comptes-rendus. Rev. des Périodiques étrangers.

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Correction.—Dr. Wm. James, the writer of the first article in the present Number, wishes to withdraw the footnote standing first on p. 17.